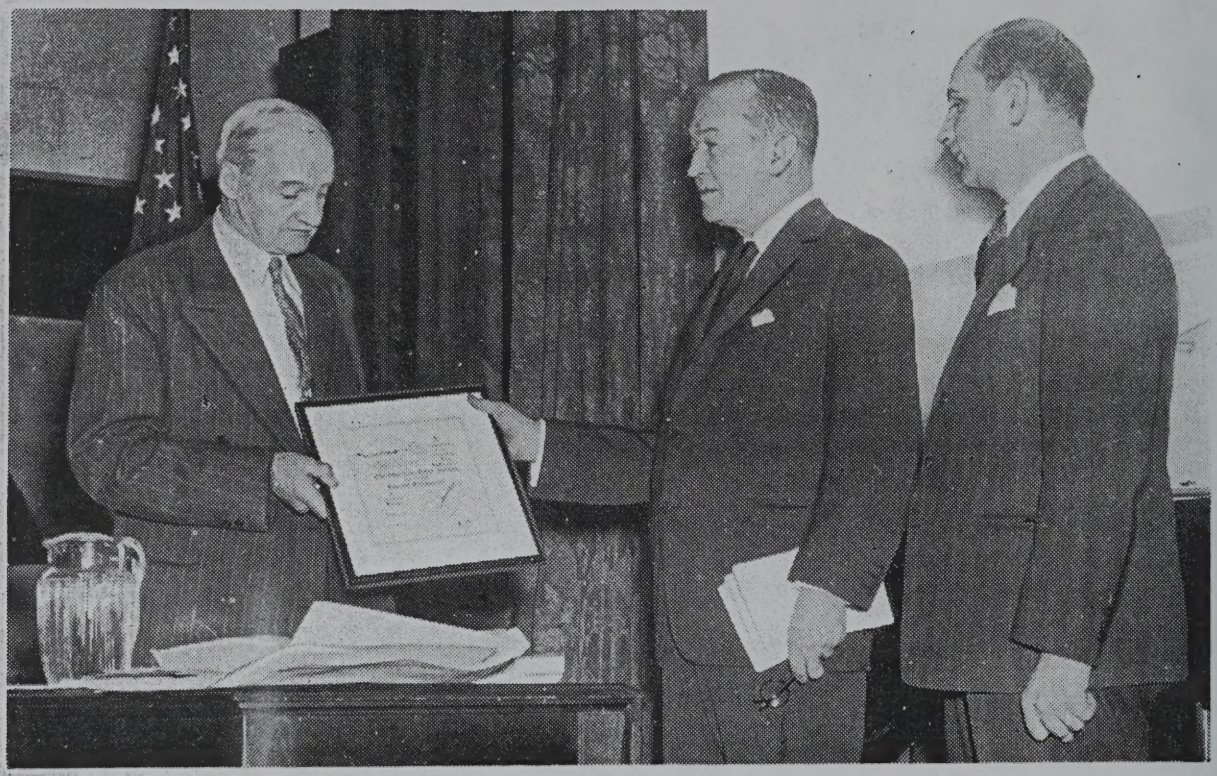
THE POLAR TIMES



Lieut. Commander Lincoln Ellsworth, U.S.N.R., (center) receives from Russell J. Walrath, President of the American Polar Society, the illuminated scroll of Honorary Membership as August Howard, Secretary of the Society and Editor of "The Polar Times," looks on. The presentation took place Dec. 5th at the American Museum of Natural History in New York.

Major Paul A. Siple, former President of the American Polar Society, Sir Hubert Wilkins, noted polar explorer, and Rear Admiral G. S. Bryan, U.S.N. (Ret.), Hydrographer of the United States Navy, look over some of the Army's polar clothing at the Society's first Washington, D.C. meeting, held Dec. 1st at the Army and Navy Club.

The Polar Times

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No. 19. DECEMBER 1944

Permanent Weather Station In Antarctic Aim of Ellsworth

Post-war plans for a permanent weather station in the Antarctic, manned by young natural scientists to be replaced each year, were announced Dec. 5 by Lieut. Comdr. Lincoln Ellsworth, USNR, polar explorer.

Commander Ellsworth told his plans at the tenth anniversary meeting of the American Polar Society, held in the Roosevelt Memorial Hall of the American Museum of Natural History. The Society awarded him an illuminated scroll as its fourth Honorary Member in recognition of his "contributions to the exploration and history of the polar regions."

Russell J. Walrath of Westfield, N. J., President of the Society, a cartographer of 44 years experience, made and presented the scroll containing maps of the areas Commander Ellsworth has explored.

"Of course, I am going back to the Antarctic again," Commander Ellsworth said, "to the fog-bound coast of James W. Ellsworth Land, where I plan to erect a permanent weather station and include a personnel of young scientists, to be replaced each year, for the investigation of the high mountain ranges over which my pilot, Hollick-Kenyon, and I flew in our crossing of Antarctica."

Commander Ellsworth is a charter member of the Executive Board of the American Polar Society which was founded Nov. 29, 1934 as a clearing house on polar matters and to band together those interested in polar exploration and the sciences related to it. The Society has nearly 500 members in all parts of the United States and its possessions and also in foreign lands including Canada, England, France, Russia, Norway, Chile, Australia and New Zealand.

The Society's first Honorary Membership was conferred Dec. 21, 1936 upon Brig. Gen. David L. Brainard, U.S.A. (Ret.) of Washington, D.C., the nation's oldest polar explorer, who was 88 years old on Dec. 21. He is the last survivor of the ill-fated Greely Arctic Expedition of 1881-84. The second went to Rear Admiral Richard E. Byrd at his Boston home Oct. 25, 1938 and the third was awarded to Dr. Vilhjalmur Stefansson of New York on Feb. 5, 1940.

On the Amundsen-Ellsworth Expedition in 1925 Ellsworth navigated one plane and Amundsen the other. They flew from Spitzbergen to a point 120 nautical miles from the North Pole where they landed and spent 25 days. It was then found necessary to abandon one of the planes. The six men of the expedition returned to Spitzbergen after a narrow escape from disaster.

While the party was still caught on the ice Ellsworth saved Dietrichsen and Omdal, two members of the expedition, from drowning. For this he received Norway's highest and rarest award, the gold medal for life saving.

In 1926 Ellsworth was co-leader with Amundsen on the trans-polar flight of the dirigible, "Norge". They left King's Bay, Spitzbergen on May 11, reached the North Pole the next day (Commander Ellsworth's birthday) and then flew over the Arctic Ocean to Point Barrow, Alaska, a distance of 1,900 miles, including 1,200 miles never before seen by man. Without stopping, the "Norge" continued on to Teller, Alaska reaching there May 14.

In January, 1934, the Commander planned to fly 1,450 miles from the Bay of Whales (south of New Zealand) across the Antarctic Continent to the Weddell Sea (south of South America) but the sudden breaking of shelf ice damaged his plane beyond repair, and he was forced to return to the United States.

Bad weather in January, 1935, halted his second attempt at a Trans-Antarctic flight from Snow Hill Island (south of South America) to the Bay of Whales.

His third try in November, 1935, brought success. He flew 2,100 miles from the Bay of Whales landing successfully four times on undiscovered land. His plane's radio having failed, he was out of touch with the world nearly two months. His silence gave rise to fears that he had been lost with his Canadian pilot, Herbert Hollick-Kenyon, but a crew from the Royal Research Society Ship "Discovery II" found the men alive in the old radio shack 15 feet under the snow at Admiral Byrd's old base, "Little America".

In recognition of this flight and for claiming for the United States 300,000 square miles of new land, which the Commander named James W. Ellsworth Land in honor of his father, Congress awarded him a special gold medal.

His last Antarctic flight of discovery in January 1939 from the Antarctic coast south of Australia, into the interior of the continent resulted in his claiming 81,000 square miles of territory for the United States. This area he named "American Highland".

At the New York meeting, Dec. 5 at the American Museum of Natural History, Dr. Vilhjalmur Stefansson, the society's third Honorary Member, paid tribute in behalf of the Society to the late Hugh L. Lee, a distinguished member, who was a veteran of several Peary Arctic expeditions. Robert Peary Lee, son of the explorer, responded for the Lee family.

Dr. Helge Larsen, Associate Curator of the Department of Anthropology, of the American Museum of Natural History, spoke and showed motion pictures in color.

Polar Explorer Honored

Antarctic Exploration Work Recognized

Illuminated scroll awarded to Lieut. Commander Lincoln Ellsworth, arctic explorer, in recognition of his contribution to polar exploration. The award was made by the American Polar Society in electing him an honorary member.

WEATHER STATIONS IN THE ANTARCTIC

Supplementing Lieut. Comdr. Lincoln Ellsworth's announcement recently at a meeting of the American Polar Society of his intention to build a permanent weather station on the coast of James W. Ellsworth Land in Antarctica, comes news from Australia of projected British weather forecasting plans in the South Polar region.

The British High Commissioner's office in Canberra stated that research being conducted in the Antarctic may have important bearings on the world food supply and communications after the war.

Lieutenant Commander Marr's party, which has been in the Falkland Island dependency since April, is being joined by a second expedition of scientists. Meteorological stations in the South Shetlands and elsewhere in the Antarctic are expected to provide some of the missing links needed for accurate forecasting of weather in Australia, New Zealand, southern South America and South Africa.

Such information is vital for assuring world food supplies from the Southern Hemisphere and for the operation of certain international airlines, the statement explained. If direct routes—Australia to South America and Australia to South Africa—are established, they will pass over the Falkland Islands dependency.

Text of Commander Ellsworth's Address at New York Meeting

Following is the text of the address of Lieut. Comdr. Lincoln Ellsworth, USNR, made Dec. 5 at the tenth anniversary meeting of the American Polar Society, when it presented him an illuminated scroll as its fourth Honorary Member in recognition of his "contributions to the exploration and history of the polar regions":

Members and friends of the American Polar Society: I deem it an especial honor to be here tonight to receive from your President, Mr. Russell J. Walrath, the scroll of Honorary Membership.

I should like to express my admiration for the very fine way your Secretary, Mr. August Howard, has assembled and published news of polar exploration in the Society's unique and excellent journal, "The Polar Times."

There are sometimes episodes that occur in the lives of men to shape their whole future careers. Although I had long dreamed of going to the Arctic, it was a chance meeting with Amundsen in 1923, while he was in New York on a lecture tour, that opened the way.

And I am also certain that I never would have gone to the Antarctic had I not been in London studying at the Royal Geographical Society when word came that the bodies of Captain Scott and three of his comrades had been found in the Antarctic. I went to the memorial services at St. Paul's Cathedral. The hush of the great silent bareheaded throng that crowded the streets outside, and the touchingly simple services within to the valor of men unafraid who do not fear to die for their ideals, appealed to me so deeply that the die was cast; I would go to the Antarctic.

To me the hero of the epic expedition to the South Pole was little "Birdie" Bowers. He was the last man chosen for the polar party and, having no skiis, was forced to travel on foot and what was remarkable was that he had to pull the sledge and not break the rhythm of his fellow skiers.

He was five feet four and had red hair. And what was remarkable was the fact that he was the only man of the expedition who never suffered from the cold, despite the fact that previous to joining Scott he had spent three years on the Red Sea, the hottest spot on earth.

The Cards Stacked Against Me

A lot of water has passed over the dam since the Amundsen-Ellsworth Expedition of 1925 to Lat. 88° North, the first flight of an airplane out over the polar basin. My father was adamant that I should not go on that flight, so he sent an emissary down to the Custom House here to interview Matt Henson. I remember well Matt's words: "No, I don't see how an airplane could fly to the North Pole. It is all piled up ice and blizzards."

You see the cards were stacked against me and Matt had his cue. Nearly twenty years have passed since that flight and Wilkins' comment today is perhaps true—"The Arctic has been mauled over too much." Perhaps he has in mind all the Russian invasions.

It seems like yesterday that we pushed off on the fast ice of King's Bay, Spitzbergen, heading toward the North Pole, 600 miles away. The tall, young mining engineer in charge of the King's Bay coal mines — he was 6 feet 4 inches and as husky as he was tall—took my hand as I sat in the forward cockpit arranging my navigating instruments, and said: "Gee, I wish I was going with you,"—then, with a wistful look in his eyes, added, "if I was only sure I was coming back." "Perhaps that's the lure," I replied, "because you don't know."

An Unexplored Continent

I myself was once the one to have regrets. On my last expedition to the Antarctic, south of Australia, we had been bumped about for one hundred days in the pack-ice before reaching the Antarctic Continent, one month too late in the season to make the flight I wanted. I got so sick of the sight of pack-ice and penguins, that I sent a wireless from down there to the Australian Government asking if they wanted to purchase my ship, the "Wyatt Earp." They replied that upon arrival in Sydney they would look her over. The deal was completed and I sold her to the Fisheries Department. Now, it took me just three weeks after my return to New York to get more fed-up on civilization than I had ever been on pack-ice and penguins. So, I again wired Australia asking to buy back my ship, but Australia never replied; so, here I am, still in New York.

ELLSWORTH AND AMUNDSEN
Photograph taken at Nome, Alaska, May 15, 1926

If the Arctic has been mauled over, not so the Antarctic. There lies a continent that approximates the size of North America, only one-third of which has been seen by human eyes!

What impresses one most upon his first visit to those regions is the tremendous scale of everything. Everything is huge, gigantic, everything superlative. The oceans that surround the continent, the Atlantic, the Pacific, and Indian, are of abysmal depth. There lives the great Blue Whale —the biggest mammal the earth ever knew; flat, table-topped masses of shelf ice breaking off into the oceans reach a diameter of fifty miles and more; the Beardmore Glacier leading up to the South Pole is the biggest glacier in the world; winds of 230 miles an hour are not unknown on the Indian Ocean side of the Antarctic.

The South Pole, ten thousand feet above sea level, stands on a plateau bigger than that of Tibet; the oldest rocks found on Antarctica are of the same age as those at the bottom of the Grand Canyon in Arizona, which are the oldest on earth.

A Field for Scientists

Antarctica is a young man's land of opportunity, and although too stark and wind-swept to offer adventure of a romantic nature, its field for scientific investigation

Snow Hill Island, on the east side of the peninsula of West Antarctica. Ice-free area in the zone of horizontal sedimentaries. This was the winter station of the Swedish Antarctic Expedition of 1901–1903.

Topography of Kerguelen Island. In the foreground, *roches moutonnées;* in the middle distance and background, plateau forms.

is unlimited. A measure of courage, perhaps, is required to lure one there; but to those who are not afraid of solitude, nor of themselves, it can make one feel, as nowhere else on earth, the magnificence and scale of the Creator.

An ice-cap that averages 5,000 feet in thickness now covers the continent; it didn't always, for seventy million years ago, in Cretaceous time, semi-tropical or tropical vegetation covered the continent. On my last 1937 expedition, I brought back a fossil trunk of a tree identified as that of Sequoia, so that the climate must have resembled that of California today.

While on this last expedition, I received a wireless from the editor of "The New York Times" as follows, "The Russians say the North Pole is getting warmer. What do you say about the South?" I replied that it would take a number of years of meteorological observations to determine this point, but the evidence points that way, I said.

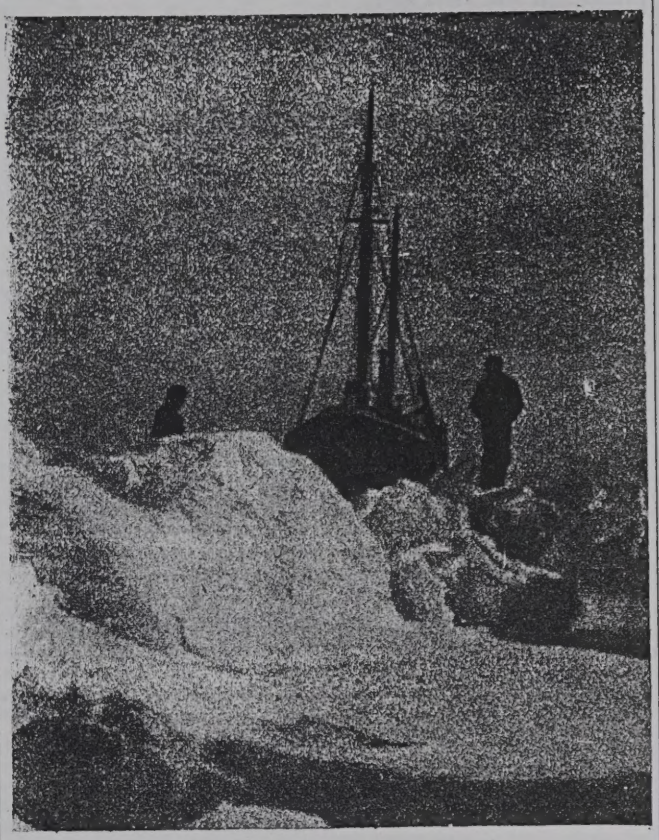
Potential Resources

It appears pretty certain that the ice-cap is now receding, for on my last voyage down there, south of Australia, we counted at least 100 islands from three to ten miles out from the ice-cap that were entirely ice-free and covered with glacial boulders, evidence that the cap had once extended out that far. These islands appeared highly mineralized, for the limestone cliffs were streaked with iron and copper wash.

I brought back fifty pounds of ore containing nickel, iron and copper. I always maintain that if the Antarctic Continent approximates the size of North America, then why shouldn't it contain all the resources of this great continent. What man needs he always has found a way of getting, if it is there. Alaska is a fine example.

The Antarctic ice-cap influences the weather of the whole Southern Hemisphere more than one realizes; for example, from weather data gathered by the whalers, a cold winter in the Weddell Sea of Antarctica generally presages a drought in the cereal belt of Argentina, 1,500 miles away. Thus the necessity for a chain of weather stations around the whole Antarctic Continent for long range forecasting. It will come after the war.

In my little 400 ton "Wyatt Earp" I have sailed three times around Cape Horn, once across the South Pacific, which without doubt is the loneliest stretch of ocean in the world, and once across the Indian Ocean, which



The "Wyatt Earp" completely blocked by ice in the Antarctic Seas. Members of the crew seize the opportunity to survey their surroundings

doubtless is the wickedest ocean in the world. There is no definite motion to the ship; she twists and screws around in all sorts of gyrations so that we had hardly left Capetown heading South when I was thrown into the engine room, dislocating my arm and breaking a tooth.

Lonely Islands

We were heading for the Kerguelen Islands, just midway between Africa and Australia, in the Indian Ocean, to take on fresh water. Gales of sixty miles an hour continually sweep over the archipelago, a French possession. Once profitable sealing was done there; today the only inhabitants are rats, rabbits and wild dogs. The rats were brought by the old sealers, and the rabbits by a scientific expedition in an attempt to establish on the islands a source of food for shipwrecked mariners the wild dogs are descendents of the old sledge dogs used by the Gauss Expedition.

But what is unique is the fact that no insects found there have any use of their wings; through disuse because of the winds they long ago lost all power to fly. The rabbits are little stunted inbred things with short legs. They have cropped off all the coarse shrubbery that covers the islands down to the ground; the dogs are so wild one rarely sees them.

Snow Hill Island is one of the most interesting spots in Antarctica—a small dot in the vast region of ice and snow—made famous by the great Swedish explorer, Nordenskjold. One of our most dramatic moments on Snow Hill Island was finding Nordenskjold's hut thirty-three years after he wintered there in 1902 and 1903.

Nordenskjold's ship, returning to pick him up after his first Winter there, was crushed in the ice. This meant that he and his party of five had to spend a second winter in the Antarctic. We could reconstruct the helter-skelter scene as the men made a mad rush to reach the rescue ship, an Argentinian gunboat, that reached them just in time to effect their rescue before the ice shut them in for the third winter.

Relics of 33 Years

The evidence of the rush was apparent. Three dogs lay just where they had been shot thirty-three years ago. Their bodies were mummified and still covered with hair. Hats lay where they were dropped — a pair of boot-trees were there, and the most amusing thing was a pair of ice skates. Unopened sardine cans and packages of chocolate also lay about. We didn't bother with the sardines, but the chocolate was still good. We also found an old-fashioned phonograph and a dozen wax records — but even in Antarctica the tunes were terrible.

The hut itself was a bare dwelling, guyed on the four corners with steel cables. This was done to keep the hut from being blown away. A sound precaution, for in his book, Nordenskjold speaks of ninety-mile gales that roared for weeks at a time.

When we looked through one of the small windows into the hut, we were amazed to see nothing at first but a huge block of blue ice that almost filled the interior. How that ice came to be there we never could discover, until I came to New York and met the botanist of that expedition who is now a research professor at Yale.

When I asked how that ice ever got there he drily replied, "We always did intend to mend that roof." It happened to be the accumulation of thirty-three years of drip—into the cabin. There was also a large timepiece which hung on the wall and the hands pointed to three o'clock. We took it down, set it going and it ticks away now, just as it did thirty-three years ago.

Humors of Exploration

Polar exploration has its humorous side as well as its serious. This one is on my wife but she doesn't think it funny. At the conclusion of my 1935 expedition across Antarctica, my wife called up "The New York Times" radio operator as we were approaching Montevideo, South America, saying neither she nor Lady Wilkins had had any contact with their husbands in three weeks and asking if he couldn't get something.

He said he'd try, and it was 9:00 P.M. ship's time of the same day, when he called up saying, "I have it—a message from the ship."

"What is it," she excitedly asked.

"This is it," he replied:—"Ellsworth has gone to bed and Wilkins has nothing to say." Typical, I would say, of both Wilkins and myself.

Of course, I am going back to the Antarctic again—to the fog-bound coast of James W. Ellsworth Land, where I plan to erect a permanent weather station and include a personnel of young scientists, to be replaced each year, for the investigation of the high mountain ranges over which my pilot, Hollick-Kenyon, and I flew in our crossing of Antarctica.

ARGENTINA GIVES UP U.S. ANTARCTIC GEAR

Formal Negotiations Led to the Recovery of Equipment, Much of It Irreplaceable

North American Newspaper Alliance.

WASHINGTON, Dec. 27—Federal departments here have begun to receive back part of the valuable and virtually irreplaceable scientific equipment left behind when the Richard E. Byrd Antarctic expedition was forced to to evacuate its Palmer Peninsula base by air in March, 1941, under conditions of extreme emergency.

A chance discovery by a Federal scientist visiting in Buenos Aires prior to the severance of diplomatic relations with Argentina gave Washington its first word that the Argentine gunboat Primero de Mayo put a landing party ashore at the abandoned American base in February, 1943, and removed some material found there.

About three months later a curator of the Smithsonian Institution was visiting a museum in Buenos Aires when he noticed a marine dredge, used to scoop up biological specimens from the bottom of the sea. It was a dredge which the Smithsonian lent the expedition and was part of the equipment left behind at the base.

This discovery started a series of diplomatic inquiries between the Interior Department's division of territories and island possessions, under whose auspices the 1939-1941 expedition was organized, our State Department representatives and the Argentine Foreign Office, which communicated with its Navy Department.

Commander Finn Ronne of the United States Naval Reserve, who was second in command of the east base, felt a personal responsibility since he was stationed in Washington. He started investigations and followed them through to a successful conclusion.

Diplomatic relations with Argentina were none too cordial at the time, and only cautious inquiries were made, always through formal channels. It was learned unofficially, however, that the gunboat stayed only two days alongside the desolate coast, departing in haste because the sea was rough and bad weather threatened to close the ice pack.

Two years before the Argentine visit, when the same ice pack threatened to close for another year, or even two years, the twenty-six men at the east base carefully packed and catalogued the equipment which they were forced to leave and narrowly escaped in two flights of an old ski-shod condor plane which landed them on an icy plateau. The supply ship Bear stood by in a winter gale.

Before the explorers left, however, they tagged the most valuable portable equipment with return addresses and requests that the finders forward it with transportation expenses collect. It was said unofficially in Argentina that the instructions were carried out as far as possible.

Material which could be moved quickly was taken aboard the gunboat. The bottom dredge, it was said, was similar to one lost by an Argentine scientific party and it was felt that the messages found at the base gave permission to replace this loss with the American product. The other material was packed in twenty-six cases and stored in a Buenos Aires warehouse where it remained for eighteen months. In that period several inquiries were made about transfer to the United States.

With the aid and cooperation of the Argentine Navy, the cases were loaded on a New York-bound freighter at Buenos Aires in October and sent via New York to the Interior Department here.

When Congress appropriated $350,000 for the exploration, the expedition was authorized to draw on service personnel and to borrow scientific equipment from Federal departments.

The equipment left at East Base included a radio transmitter, along with radio parts; meteorological instruments, transits, sextants, magnetic compasses, artificial horizons, instruments for magnetic measurements, binoculars, cameras and photographic supplies, etc.

The buildings, said to have been found in excellent condition, also contained precision tools, a machine and electrical shop, carpentry shop and some biological specimens, including penguin, seal and bird skins collected for the National Museum.

Departments which had lent equipment included Interior, Smithsonian Institution, Naval Observatory, the Army Engineers, the Coast and Geodetic Survey, the Weather Bureau, the Hydrographic Office and various others.

Personal effects of various members of the East Base personnel were returned, including those of Capt. Carl Eklund, now of the Army Air Forces; Comdr. Ronne of the Bureau of Ships, Navy Department; Lt. Arthur Carroll, Donald Hilton Clarence Steele and others. It was a great disappointment to Comdr. Ronne when he failed to find, in his personal effects, a rock requested by Radio Commentator Lowell Thomas which was destined to be a part of his famous fireplace "The History of Ages" constructed in his home at Pawlings, N. Y.

The Antarctic effects they left behind them so long ago and so far away recalled to them the 84 days Comdr. Ronne and Capt. Eklund traveled on skis behind their dog team while they mapped 450 miles of new coast line in the name of the United States.

High Alcan Upkeep Is Seen by Wilkins

WASHINGTON, Dec. 2

It will take plenty of costly maintenance to keep the Alcan highway open to tourist travel to Alaska after the war, Sir Hubert Wilkins, Arctic explorer, told the 10th anniversary meeting of the American Polar Society here last night.

Scrapers and rollers can keep the long motor way open during the short summer season, Sir Hubert said, but during freezing weather water works up from underground and forms small glaciers which must be passed under the highway in culverts heated by drums of burning oil.

Sir Hubert is convinced an "ideal" way for the postwar tourist to make the journey is to drive to Alaska in midsummer and put his car on a coastal steamer for the return to the United States.

About 125 members and guests of the society, meeting at the Army Navy Club, were given a demonstration of new Arctic equipment.

Major Paul A. Siple, former President of the society, was chairman of the meeting which he and Malcolm Davis arranged and promoted.

Major Siple told briefly of the organization and history of the society and its publication, "The Polar Times", and asked that members accept membership on special committees to report on polar work in specific fields. He suggested that presidents of the society be limited to two terms of a year each and that if possbile they be chosen from among those who have been to the Arctic or Antarctic.

Commander Finn Ronne, U.S. N.R., reported that some equipment picked up from East Base by a landing party from the Argentine gunboat Primero de Mayo has been received in this country and is awaiting distribution. An account of this Antarctic episode appears in this issue.

William House of the Quartermaster General's Staff described the Army's polar clothing and gear on display stating that furs cannot be processed in sufficient quantities for the Army's Arctic forces and that equipment is provided in accordance with a table taking into consideration the area and its particular problems.

Watson Davis, Director of Science Service and Editor of "Science News Letter" recounted his visit to Greenland bases with other press representatives.

August Howard, Secretary of the society, read a paper on the newly-organized Arctic Institute of North America. The showing of motion pictures in color, made by Dr. Russell G. Frazier of Bingham Canyon, Utah, physician at the West Base of the recent United States Antarctic Service, ended the meeting. A second Washington meeting was tentatively set for Friday evening, April 6, the 36th anniversary of the discovery of the North Pole by the late Rear Admiral Robert E. Peary.

Longs for Polar Regions

Master Sergeant Louis P. Colombo with his luxuriant whiskers

Soldier Hopes For Fifth Trip To Polar Region

Veteran of Byrd Expeditions and Duty on Greenland Resting at Atlantic City

ATLANTIC CITY—Master Sergeant Louis P. Colombo, thirty-three years old, who returned to New York from the Greenland Base ice cap with a beard that made Monty Woolley's look like a few wisps of smoke, is sunning himself on the Boardwalk these days and hoping the Army will send him back north.

If so, it will be his third trip to the Arctic and his fifth to the polar regions. As a civilian he accompanied Rear Admiral Richard E. Byrd on two expeditions to Antarctica.

Sergeant Colombo has shed the beard, a protection against Greenland gales that blew up to 140 miles an hour, he said, but an irritation, epidermal and social, down here. Its chief mourners were his nephews, Robert Colombo, fifteen, and Joseph Colombo Jr., eleven.

They are the sons of Chief Specialist Joseph Colombo, of the 3d Naval District, a detective on leave from the New York Police Department, with whom the sergeant makes his home at 24-31 Twenty-fourth Street, Astoria, Queens.

A seaman's experience and a hardy physique qualified Sergeant Colombo to accompany Admiral Byrd to Little America, where he learned to "yake" (to start) a dog team—and stop it, too. He enlisted in the Army in June, 1941, and soon found himself yaking for a year on Baffin Island, Canada. His second tour of duty with the base ice cap detachment lasted sixteen months. After a holiday furlough he is awaiting reassignment at the Army Air Forces Redistribution Station.

LAST ANTARCTIC AID WENT TO PACK DOGS

U.S. Explorers, Before Forced Exit by Plane, Made Provision for Humane Disposal

North American Newspaper Alliance.

WASHINGTON, Dec. 29 — The United States Antarctic explorers left two clocks ticking behind them when their time finally ran out in Palmar Land in March, 1941, one to break the endless polar stillness with a man-made sound for thirty days or more and the other to equalize the few hours of life remaining to their faithful sled dogs.

The last thing which the explorers saw of East Base after their overloaded old Condor wrenched her skis free of glacier ice and bounced into the gale was the familiar, upturned muzzles of Eskimo huskies, Siberians and Malemutes, crouching obediently in the snow, just as their masters had ordered.

How the men parted with sixty-one dogs which had shared their hardships for thirteen months is part of a story revealed for the first time with the arrival in Washington of some of the scientific equipment and personal gear left behind when the closing ice pack forced an emergency escape by air.

The next men to visit that coast after the Condor flew away came two years later on an Argentine gunboat which found a channel in the ice pack in February, 1943, the middle of the Antarctic summer, and put a landing party ashore to investigate the abandoned American base.

No word was received of the fate of the last three dog teams, perhaps because ice and snow long since had buried them, but the men who set a time bomb to insure their destruction once the Condor managed to get away from the rough ice are certain the end was as swift and humane as a well-laid dynamite charge could make it.

When the supply ships Bear and North Star went south to evacuate the expedition's land-based personnel in 1940-41 they first removed men and equipment from the West Base at the Bay of Whales, and the Bear then proceeded to Palmer Land. The barkentine was unable to find a way through pack ice almost 150 miles wide. The twenty-six men at East Base began to prepare for an emergency escape.

Pilots Ashley Snow and Earl Perce, both of whom are now Navy fliers, began to groom the Condor for its most hazardous mission. Scientific equipment and personal gear was stored. Each man was to take food and equipment for a month on the ice.

Meanwhile, the Bear crew 145 miles to the north prepared a precarious landing strip on an icy plateau. There remained the question of what to do with the dogs.

None of the dogs could survive if freed. Hunger eventually would drive the dogs at one another's throats. There was time to risk only two flights.

The first take-off with twelve men and two pilots was successful, as was the landing. The Condor was soon radioing his progress on the return flight. Time was running out. The men wound a thirty-day clock and set it ticking. They removed the face and minute hand from an alarm clock. Three fifty-pound charges of dynamite were set in a twenty-foot triangle under the snow and three dog teams staked down over the charges. The hour hand on the alarm clock was set to close an electric circuit to detonate the dynamite three hours later.

On the first attempt, pilots Snow and Perce could not pull the Condor off the ice. The pilots ordered the men to jettison every possible article. This time the plane took off.

Darkness was descending when the Curtiss Condor came in to a rough landing. The men went down to the Bear's boats, leaving the battered Condor as she stood.

One man carried a suspicious-looking suitcase, but no one asked him any questions until he came over the side of the Bear. He opened it and out tumbled seven puppies, just ten days old.

The right whale, a source of whalebone, got its name (according to whalers) because it was considered by them to be the right species to pursue. However, it is more probable that its name was meant to designate it as the true or typical whale.

More British Scientists Will Be Sent to Antarctic

Those Already in Falklands Encourage New Projects

From the Herald Tribune Bureau
Copyright, 1944, New York Tribune Inc.

LONDON, Sept. 6.—The British government will send another expedition this fall to the Antarctic to reinforce a small party of scientists who have been carrying on research and survey work there since April, it was reported today.

Fully equipped bases already have been established by the first group of administrative officers and scientists in these dependencies of the Falkland Islands, which are the most remote of British possessions. The supplementary expedition will leave in October, it is believed.

The decision to send the new group was based on favorable preliminary reports from the first party on the possibility of early resumption and development of whale fishing; establishment of radio stations to give more accurate reports; the setting up of special stations for improvement of radio transmission between Australia, New Zealand and Britain, and exploitation of mineral products.

Among those in the nef party will be young military scientists who have distinguished themselves in radio location work since the battle of Britain got underway.

FATE OF ATTU COUPLE IS STILL UNSOLVED

WASHINGTON, Aug. 5 (AP) — The fate of an elderly couple, only white persons on Attu Island at the time of the Japanese invasion of the Aleutians two years ago, still remains unsolved, the Department of the Interior said today.

Nothing has been heard of the couple, Mr. and Mrs. Charles F. Jones, since their weather bureau radio station went silent on July 7, 1942. The husband had been employed as a radio operator, Mrs. Jones as a teacher.

"We are working on the assumption—unduly hopeful, perhaps—that Mr. and Mrs. Jones were taken to Japan," a department spokesman said. "On the other hand, it is conceivable they perished in one way or another during the attack. Only time will tell.

"One report—entirely unconfirmed—had it that Jones committed suicide and Mrs. Jones was taken a prisoner."

The spokesman said that Mr. Jones, prior to the attack, had notified Charles R. Magee, radio operator on the neighboring island of Atka, that he had a "hunch" the Japanese would attack and that he had assembled a rifle, a shotgun and a handful of natives to repel the invaders.

When Mr. Jones' radio went silent, Mr. Magee correctly assumed the hunch had become fact and persuaded the captain of a Navy fuel boat to evacuate Atka's population—himself, Mrs. Magee and eighty-five natives.

The couple was assigned to Alaska in 1930 by the Bureau of Indian Affairs and transferred to Attu in August, 1941. He was described as a native of St. Paris, Ohio, and Mrs. Jones of Waterbury, Conn.

GROW ALEUTIAN FLORA

Soldiers Plant Gardens in Front of Quonset Huts

AN ALEUTIAN ISLAND BASE (UP)—Arrival of orchid time in the Aleutians has converted hundreds of men, from GI's to generals, into ardent flower fanciers.

The orchids, miniature replicas of the lush, tropical flower, bloom profusely on protected hillsides, but are only one of a myriad of flowering plants which cover the grassy Aleutian slopes. Buttercups, wild iris, bluebells and lilies of the valley are among the more common blooms.

Many soldiers have well-kept flower gardens around the doors of their quonset huts, and flowers border the pathways. Vases with an assortment of blossoms brighten the corners of many huts, and it's not unusual to see officers of the post commander's staff returning from their weekly hike carrying flowers.

Amateur botanists found flowers on these islands markedly similar to species on the mainland. In general, the flowers are much smaller here—where growth is conditioned by the short summer season—and are more delicately scented or without any scent.

FORGOTTEN CONVOY KEPT AN ICY VIGIL

Six American Ships Were Held in Russian Port 8 Months, Awaiting Orders

WASHINGTON, Sept. 9 (AP)—The story of a "forgotten convoy" which spent eight months in Arctic north Russia was told today by the War Shipping Administration.

In January, 1943, six ships, loaded with food and war materials, sailed from New York to join eighteen other Allied freighters, bound for Murmansk.

After weathering storms and Nazi air attacks off Norway, the convoy made its destination in two months, and the crews settled down to await the formation of a new convoy for the return trip. It was eight months before their ships were put into a return convoy.

As time dragged on, the seamen found an interpreter willing to arrange dates with Russian girls. But before the new convoy finally was made up the interpreter long since had lost his job. He just wasn't needed any more.

An American naval attaché in North Russia filled out official-looking certificates of membership in "The Society of the Forgotten Convoy of North Russia."

One issued to Ensign Philip N. Enegess of Newton, Mass., reads as follows:

"Be it known to all men by these presents: that Philip N. Enegess on board the SS. City of Omaha, did suffer eight months' confinement in north Russia and did undergo all the privations connected therewith, that he did shiver through the Arctic and bask in the rays of the midnight sun, and by virtue of these facts is herewith declared to be a certified member of the forgotten convoy."

Other American ships in the convoy were the Thomas Hartley, Francis Scott Key, Beacon Hill, Bering and the Israel Putnam.

Herd of Fur Seals Growing Fast

WASHINGTON, Sept. 21 — (A. P.)—The United States probably will sell more of its sealskins after the war, says Interior Secretary Ickes.

The government-owned herd of fur seals on the Pribilof Islands is growng fast.

Mr. Ickes, through his fish and wild life service, is custodian of the famous herd. He announced yesterday it now numbers 2,945,663. Last year's census showed a population of 2,720,000.

In 1911 the herd was only 123,138.

This year 47,652 skins were taken from the islands. Canada got 20 per cent of those under an international agreement. The Pribilofs, which Russia threw into the Alaska deal in 1867, are in the Behring Sea. At that time the herd numbered possibly 4,000,000.

Mr. Ickes says the capital value of the herd is estimated at well over $100,000,000 and sales of skins have already put $10,000,000 in the United States Treasury.

THE PLIGHT OF ALASKA: HURDLES FOR EXPECTED BOOM

Throngs of Settlers to Find Natural Riches, but Economic Handicaps

Factors of high costs, distant markets, lack of capital as main obstacles

Alaska is expecting a big postwar influx of new people. The war has drawn attention to the territory. Many soldiers, sailors and migrant workers have acquired an enthusiasm for the area. The Army's Information and Education Division is spreading word of settlement prospects for veterans. There are current proposals for planning a big Alaskan development, one of them just rejected in Congress. Continuing rows over territorial administration have caught the headlines. Alaska is much under discussion. And officials are swamped with inquiries as to homesteading and other settlement possibilities.

Some are wondering, however, whether the would-be migrants know just what lies ahead of them. The territory has room for these people, room to spare. But whether it can support a rapid growth in population has come into question. There are stark economic facts which raise serious doubts.

It is true that Alaska is a land of abundant resources, of productive or potentially productive farms, fisheries, forests and mines. But it also is a land that has no market for the things it can produce. It is a land, too, of high-cost production, making competition difficult even if markets were available. And, for any large-scale development, the territory needs big investments of outside capital, which is frightened away by the factors of markets and costs.

Such, in general terms, is Alaska's predicament. A more detailed appraisal of its postwar prospects is demanded by the new interest in the territory, and appraisal which begins with the broad changes wrought by the war.

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Wartime changes. The war has given Alaska a boom reminiscent of gold-rush days, but a boom now rapidly tapering off. The Army and Navy spent several hundred millions of dollars in the region. A network of highways was installed which, at prewar roadbuilding rates, would not have been completed for 50 years. A full system of airways and airports has been established. Port and harbor facilities have been enlarged and modernized. Population has grown from some 75,000 (more than half Indians and Eskimos) to nearly 100,000. At peak, 25,000 civilians found work on war construction jobs. Now, that number is down to 2,000. Prices have soared in a land where prices always were high.

But the war has done little or nothing to solve Alaska's triple problem of markets, costs and capital. These three factors condition the future of nearly every major economic activity in the Territory. To take these activities one at a time:

Farming. Vast farm land areas are available to the homesteader. A living, probably a good living, awaits the settler. But he must be tough fibered, ready to undergo hardships and deprivations not unlike those which plagued the pioneer on America's own now-vanished Western frontier. The settler, too, must be equipped financially to weather the initial period and defray the cost of clearing or otherwise preparing his land, buying equipment and erecting buildings—costs which run higher in Alaska than in the United States.

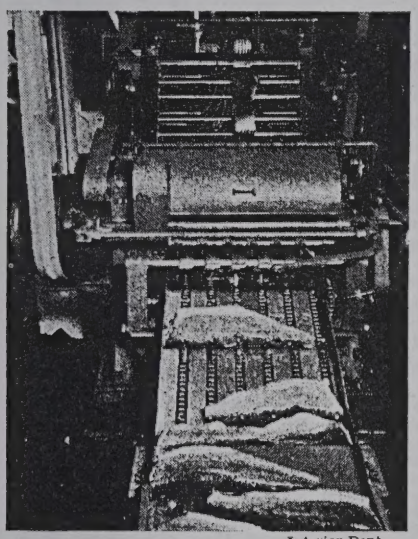
Most reasonably hardy vegetables can be raised. The frost-free season is short, but in summer there is sunshine from 15 to 19 hours a day, and, once started, a crop matures quickly. But farm methods unfamiliar in the United States must be used due to climatic and soil conditions.

Successful farming depends, too, upon accessibility to local markets. The famous

Matanuska colony, after many tribulations, finally became prosperous when the establishment of military bases at Anchorage, 50 miles away, created a market for its produce. But, in general, Alaska imports much more food than it raises, and, if a crop can be gotten to market, there is a demand for it.

Since Alaskan farm products, because of distance and costs, cannot be sold in the United States, the development of large-scale agriculture awaits the growth of year-round industries. These would attract population and provide purchasing power for the farm market. Most Alaskan industry, however, is highly seasonal.

Fisheries. Salmon fishing and processing provides employment only a few weeks or months each year. It is big business, while it is a business at all, for Alaska provides 60 per cent of the world's salmon pack.



—Interior Dept.

ALASKAN SALMON

A triple economic problem . . .

In prewar, half of the industry's workers were brought in for the season from the United States. Expansion of the industry is made difficult by conservation laws necessary to protect the fish from extermination.

Gold mining. Gold is Alaska's really salable product. The Treasury buys every ounce produced. It, too, is seasonal. Placer mining is confined to four to eight months, when the streams are free of ice. Emphasis is shifting from the lonely, individual prospector to big-company dredging operations. Year-round lode mining in prewar days employed 900 to 1,000 men. Gold mining, discontinued early in the war for man-power reasons, now is reviving.

Oil. The Navy is planning to drill soon in several highly favorable localities. If oil is found and pools develop, much employment would result. However, the Navy, which owns the land, might keep the oil in storage underground. Some other oil areas, however, could be leased to private developers by the Interior Department.

Timber. Alaskan timber offers tremendous possibilities. Estimates are the Territory could supply a quarter of U. S. pulp consumption for decades without depleting its vast forests. The Forest Service now is dickering with the pulp industry. A large capital investment is considered necessary. Any Alaskan pulp industry would have to pay high wages, expect a large labor turnover at first, and then compete at great distances with the massive product of the Canadian forests, as well as that of Scandinavia. The Scandinavian producers are equipped to meet the distance disadvantage.

Minerals. There are big mineral deposits. They include a good grade of coal, in abundance, but not exportable under present or foreseeable conditions. Wartime shortages in the United States brought mercury and antimony into production, but that now is ending. There is a continuing small production of copper, tin and lead, the last as a by-product of gold mining. Under normal conditions, the minerals all are too plentiful on American markets to permit much Alaskan competition.

Aviation. Alaska long has been air minded. With the new airway facilities, local air travel is expected to increase broadly. Alaskans are hopeful, too, that routes from the United States to the Orient may pass over Alaska, with operational landing points within the Territory, bringing in permanent employment, both in servicing planes and in sales to passengers.

Tourists. The tourist industry looks for a bonanza after the war. Hotels, inns and lodges, to accommodate an in'rush of vacationers, have yet to be built, but plans for erecting them definitely are made. This construction work is to provide considerable employment. The tourist business itself, some predict, may run to several million dollars annually.

Service trades. Under all these conditions, an expansion of the service trades is considered inevitable, with the resulting creation of a number of small businesses to attend to the needs of tourists and the expanding permanent population.

Outside capital. Prospects are that this will draw capital into the Territory, although in comparatively small individual driblets, not the big outside capital investments that are needed. Over a period of many years, Alaskans have complained that most of the money made in Alaska has been spent in the United States. It has gone in profits to outside owners of the big fishery, gold mining and other companies. Even wages of imported workers in the fish-packing industry, in some cases, have not been paid until their return to the United States. The result is that resident capital is insufficient for any major development. One hope among Alaskan leaders is that the capital may be furnished by the United States Government, that the TVA idea might be extended to the Territory. But, for the present, Congress is not so minded. The House Appropriations Committee recently rejected a White House-approved proposal that $3,860,000 be spent to make surveys and plans for Alaskan development, on the ground that too many studies already had been made.

Colony status. Many Alaskans think the Territory has been held to something less than colony status. They complain

—U. S. Marine Corps

ALASKAN SAFETY

. . . faces test after the war

that whatever action comes from Washington is unsympathetic and taken without knowledge or understanding of the problems involved. This feeling has been intensified recently by developments that have led to a belief that the Interior Department intends to create extremely and unduly large reservations for Indians. Even some of the Indians are against a program of this kind.

So, all in all, there are discouragements for the would-be settler in Alaska. But there are opportunities, too. An apparently large group of Alaskans thinks a stampede of new arrivals would be harmful. It looks for growth, but on an orderly and gradual basis, of several thousand permanent additions to the population annually. Some Alaskans fear that a stampede is in the making.

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ROOSEVELT VISITS ALEUTIAN ISLANDS

By The United Press

AN ALEUTIAN ISLAND BASE, Aug. 3 (Delayed). — President Roosevelt visited this island stronghold today and said strong military bases must be maintained in the Aleutians to bar future generations of Japanese from attacking the United States.

The President, making his westernmost penetration of the Pacific war theater, congratulated troops in the Aleutians for ousting Japanese forces and converting the fog-swept islands into a formidable defense ring.

Arriving aboard a cruiser on which he took his swing through Pacific Army and Navy bases, Mr. Roosevelt made a four-hour tour of the island, which a year ago was only a short distance from enemy-occupied territory.

He conferred with Vice-Admiral Frank J. Fletcher, commander of the North Pacific force, and visited airfields, warehouses, dock facilities and other installations which make this island the backbone of northern operations against the Japanese.

High light of his visit was a luncheon at which he dined with 200 soldiers, sailors and marines, eating ordinary G. I. fare.

Mr. Roosevelt visited the Navy base in the morning and inspected Army, Air Corps and naval air installations after lunch. Riding in the front seat of an olive-drab sedan, the President saw thousands of sailors and soldiers lining the muddy road.

In an informal luncheon address Mr. Roosevelt expressed the wish that more people could see what had been done here to carry the war forward in the Pacific in an incredibly short time.

The United States was caught unprepared in the Aleutians because we were used to civilization, he said. No one could have visualized that the Japanese would attack in such an unsportsmanlike way, he said. Adding that in the future Americans will always distrust Japan.

He pointed out that the job of the troops in the Aleutians was first to throw the Japanese out and then make it impossible for them to return. At the same time, he said, development of military bases in the north was benefiting national growth by opening new areas for pioneering after the war.

Speaking of post-war possibilities of Alaska, the President admitted the climate was not the best in the world but compared it to that of Scandinavian countries. Much of the Alaskan mainland has good agricultural land, he declared, adding that he would not be sorry if people in the service wished to settle there.

Later, the President's party rode in the rain to view the thousands of Quonset huts housing troops on the island. Thousands of sailors and soldiers, including Negro troops, stood at attention before their headquarters as the President passed. He waved and returned their salutes.

After an informal review of troops in a block-long warehouse, the President returned to his ship. However, the cruiser was forced to remain tied up for more than twenty-four hours after scheduled departure time because of a severe storm at sea.

A guard of honor salutes the President as his car moves through mist and rain on an inspection tour of an Aleutian Islands base

Aug. 12

Following is from President Roosevelt's address at the Puget Sound Navy Yard as recorded and transcribed by THE NEW YORK TIMES:

After rejoining our ships we headed for the Aleutian Islands. I had read about them, but I'd never been there before.

Arriving there four days later at Adak, which is one of the more westerly islands of the group, there again I found intense training at what might be called a nearly completed advance base. It is from there that a great part of the expeditions for the recapture of Attu and Kiska started. Adak two years ago was a bleek and practically uninhabited spot which with the other Aleutian Islands seemed relatively unimportant in the plans for the security of our own continent.

You here can well realize the commotion that followed the Japanese occupation of Attu and Kiska. You've dreamt of Japanese marching up the streets of Bremerton or Seattle tomorrow morning. You have thought that the Chiefs of Staff in Washington were not paying enough attention to the threat against Alaska and the coast. We realized, of course, that such a Japanese threat could become serious if it was unopposed. But we knew also that Japan did not have the naval and air power to carry the threat into effect without greater resources and a longer time to carry it out.

Preparation to throw the Japanese from that toehold, very skimpy toehold, had been laid even before the Japs got there, and the rest of the story you know.

It took great preparations and heavy fighting to eject them from Attu and by the time the great expedition to recapture Kiska got there the Japanese had decided that discretion was the better part of valor. They decided that retirement and retreat was better for them than hara-kiri, and so they abandoned the Aleutians.

The climate at Adak is not the most inviting in the world, but I want to say a word of appreciation to a thousand or so officers and men of all the services who have built this base and other bases, many other bases, in the extreme northwest of the American oCntinent built them up in such a short time to a point where the people on our Pacific Coast, the people of British Columbia and of Alaska, can feel certain that we are safe against Japanese invasion on any large scale.

Kodiak Base Also Cited

We were delayed by fog and rain as almost everybody is up in those parts; we had to give up putting in at Dutch Harbor but we did stop at Kodiak, a large island off the end of the Alaskan Peninsula. Here, also, the three services completed a very excellent, though smaller, base. The first battle town really that we built in those parts, and there's actually a small community there, the first that we saw in Alaskan waters and the trees that we saw. That town and those trees made me think of the coasts of Maine and Newfoundland.

We were told that a number of officers and men at this place and other posts are considering settling in Alaska after the war is over. I do hope that this is so because the development of Alaska has only been scratched and it is still the country of the pioneers, and in one sense every American is a descendant of pioneers.

Much Room for Exploration

Only a small part of Alaska's resources have been explored and there is, of course, an abundance of fish and game and timber, together with great possibilities for agriculture. I could not help remembering that the climate and the crops and other resources are not essentially different from northern Europe—Norway and Sweden, Finland—for the people of these countries in spite of the cold and in winter darkness have brought their civilizations to a very high and very prosperous level. On my return to Washington I am going to set up a study of Alaska and the Aleutian Islands as a place to which many veterans of this war, especially those who do not have strong home roots, can go to become pioneers. Alaska is a land with a very small population, but I am convinced that it has great opportunities for those who are willing to work and to help build up all kinds of new things in new lands.

So this trip has given me a chance to talk over the social and economic future of the Hawaiian group with Governor Stainback and the future of the people of Alaska with Governor Gruening. By the way, he asked me to assure you that the tan which I have acquired in Alaska in a week has come from the bright sunlight of Alaska. Near Juneau one afternoon, when we were nearly fogged out, I played hookey for three hours. I went fishing and I caught one halibut and one flounder.

Links With Asia After War

Speaking again of the future, of the future of the defense of the Pacific, the use of its strong points in order to prevent attacks against us:

You who live in the Pacific

Northwest have realized that a line for sea and air navigation following the Great Circle course from Puget Sound to Siberia and China passes very close to the Alaskan coast and thence westward along the line of the Aleutians Islands.

From the point of view of national defense, therefore, it is essential that our control of this route shall be undisputed. Everybody in Siberia and China knows that we have no ambition to acquire land on the Asiatic continent.

We as a people are utterly opposed to aggression and sneak attacks. But we as a people are insistent that other nations must not under any circumstances through the foreseeable future commit such attacks against the United States. Therefore, it is essential that we be fully prepared to prevent them for all time to come.

The word and the honor of Japan cannot be trusted. That is a simple statement from the military and naval, and air point of view. But with the end of a Japanese threat, soon we hope, there is an excellent outlook for a permanent peace in the whole of the Pacific area.

It is therefore natural and proper for us to think of the economic and the commercial future. It is logical that we should foresee a great interchange of commerce between our shores and those of Siberia and China.

And in this commercial development Alaska and the Aleutian Islands become automatic stepping stones for trade, both by wafer and by cargo planes. And this means the automatic development of transportation on the way there, including the Pugent Sound area.

It is as long as ten years, I think, that I talked with Mr. Mackenzie King, Prime Minister of Canada, in regard to the development of highways, in regard to air routes and even a railroad via the northwest and British Colombia and the Yukon. Great interest in both nations was aroused but it took the war to get quick action.

Today the Alcan Highway is practically completed and an air route to Fairbanks enables us to deliver thousands of planes to our ally Russia by way of Alaska and Bering Straits and Siberia. These planes are an important factor in the brilliant and brave advance of the Russian armies on their march to Berlin. And I might observe also that our close relations, our true friendship with Canada during these years has proved to be an illustrious example of working hand in hand with your neighbor for the general good.

The Polar Times

Published June and December by the AMERICAN POLAR SOCIETY, Care American Museum of Natural History, Central Park West at 77th Street, New York, N. Y.

AUGUST HOWARD, Editor

THE POLAR TIMES highly recommends "The Polar Record," published January and July by the Scott Polar Research Institute, Cambridge, England.

The American Polar Society was founded Nov. 29, 1934, to band together all persons interested in polar exploration. Membership dues are one dollar a year, which entitles members to receive THE POLAR TIMES twice a year.

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ALASKA RUSSIANS TRACED FROM 1571

'Colony' Settled by Novgorod Subjects of Ivan the Terrible 'Lost' After 130 Years

CAMBRIDGE, Mass., Dec. 2—Did Russians precede Englishmen and Frenchmen in establishing the first permanent colonies in North America? Documentary, archaeological and geographical evidence reported today indicate that a trans-Siberian expedition of residents of Novgorod settled in Alaska about 1571, during the reign of Ivan the Terrible, thirty years before the founding of Jamestown in Virginia.

Theodore S. Farrelly of New York reviews the evidence and constructs a theory that the colony was located near the town of Kasilof, Alaska, where the remains of a mystery settlement were dug up 1937, in an article, "A Lost Colonly of Novgorod in Alaska," in the forthcoming issue of The Slavonic and East European Review published at Harvard University.

A letter written by a missionary from Kodiak about 1794 reported that Russians of a colony founded eight years before by Lebedef had come into contact with the Novgorod Russians, and gave an account of them. This letter was found among records sent many years ago from the United States to St. Balaam's Monastery on Valamo in Lake Ladoga, Russia, and was published here in 1934.

Historical documents establish a Lebedef colony at Kasilof, and near here, in 1937, a survey party of the Department of the Interior found the remains of a settlement at least 300 years old.

By elimination Mr. Farrelly shows that this Lebedef colony is the only one whose location would fit the geographical identifications given in the missionary's letter.

"Where the inhabitants went and why is a mystery," he writes. "One solution might be found in the frightful warfare waged on Cook Inlet between the Russian fur hunters and natives in the days of the Lebedef occupancy.

"Annihilation was often the price of defeat, and as the Novgorodian colonists were not involved in the feuds developed by the race for wealth, they may reasonably have withdrawn at that time to the interior of Alaska and have disappeared through intermarriage with the natives.

"This in spite of the fact that they had proved themselves capable of preserving their racial integrity as Russians for approximately one hundred and thirty years."

Origin of First Indians

The first American Indians came over the Bering Straits from Asia as a hunting people 15 to 25 thousand years ago, archaeologists say.

Eskimos Find Solution to Better Heating In Coal From Meade River District

The Christian Science Monitor

BARROW, Alaska—Up here on the rim of the Arctic, the heating problem has been especially acute since the war began because of a scarcity of incoming ships. So with the help of Engineer Norman Duff Ebley of the United States Bureau of Mines, Eskimos this summer began mining their own coal on Meade River, 70 miles south of this most northern community on the continent.

The Office of Indian Affairs engaged the services of the engineer to teach mining methods to the natives so they might be self-sufficient in the matter of fuel. As Gov. Ernest Gruening discovered in an airplane visit here last fall, coal coming in by boat cost $60 a ton while that mined on the Meade will be sold for about $15 and may be taken out free by those who want to work and haul it back to town.

The tundra is soft during the summer but the coal will be loaded onto sleds and pulled by tractors over the snow this coming fall.

A dearth of whales during the past two summers left the natives so short on a major source of food and fuel—the oil is burned for heating and cooking—that they had to forage elsewhere for food, leaving them little time to gather driftwood or pitch (petroleum residue) which have sufficed in the past.

To Dig for Alaska Oil in April

SEATTLE, Oct. 30 (AP).—Work on the first oil well in the Navy's 35,000 square miles of oil reserves in Alaska, about 175 miles east of Point Barrow, will start in April, Rear Admiral C. A. Trexel said at a press conference here today. He said a Point Barrow permanent base camp, occupied by 200 Seabees and Naval Engineering officers, is virtually complete and the exploratory party expects to leave for the oil area in January.

Ice and Fog All Right, But Dust Storms —!

AN ADVANCED ALEUTIAN BASE, July 1 (UP).—Oldtimers around here used to congratulate themselves on having survived everything in the weather man's book—wind, snow, ice, rain and fog. But when the Aleutians came up with dust storms the oldtimers thought they'd had more than enough.

Some of the dust storms here would make refugees from the Oklahoma dust bowl feel right at home. There was enough real estate in the air twenty-four hours a day to build a new island chain. The Army engineers have been engaged for two years here in one of the largest dirt-moving operations ever carried out, but the recent williwaws are showing them some new tricks.

The engineers took the tough island sod off and moved mountains to make room for military installations, and with the sod off and the sand and volcanic ash exposed, the wild Aleutian winds started in where the engineers quit.

The troops here have come up with a new theory as to how these battle-scarred islands originally were formed. They are convinced now that they blew in from Siberia.

CHRISTMAS DAY IN ALASKA

Soldiers and Eskimos Celebrate in 10 Below Temperature

POINT BARROW, Alaska, Dec. 25 (Delayed) (AP)—In Arctic darkness Eskimos and soldiers gathered today at the site of the ancient village of Utkiavi to observe Christmas.

The temperature was only 10 degress below zero and a brisk wind blew in from the Arctic Ocean.

There were religious services and whistling, jumping, dog sled races and turkey for Army men.

The Eskimos feasted on raw fish, walrus and whale meat dipped in seal oil. There was reindeer stew for all and Barrow Village's twenty-six white residents turned out for the festivities.

Christmas Day marked the beginning of a week's feasting and dancing among the Eskimos.

Among those attending the ceremony were Dr. Edward Seinfeld of New York City.

The Army forces here, manning a radio communications center, worked as usual. Among the men on the job were Sgt. Adolph Drummer of Seymour, Conn., and Corp. Elmore H. Sachs of Danbury, Conn.

OIL IS FOUND IN ARCTIC

Large Field in Northern Alaska Will Be Drilled by Navy

POINT BARROW, Alaska, Aug. 19 (U.P.)—Large oil seeps within the Arctic Circle on the northernmost tip of Alaska have been discovered and drilling operations will soon begin.

The seeps cover about 30,000 square miles of land east of Cape Simpson. Naval geologists and Seabees arrived here recently to start the drilling operations.

"It has long been suspected by oil men that the Canol and Turner Valley fields in Canada seeped in from a large untapped parent pool," said a geologist.

SIX CANADIANS, SIX AMERICANS ON ARCTIC BODY

Ottawa, Sept. 21 (CP).—Composition of the newly-created board of governors of the Arctic Institute of North America was announced today by Dr. H. L. Keenleyside, Assistant Undersecretary of State for External Affairs, who is acting as interim chairman. Arrangements for establishment of the board were made at an adjourned meeting of the Institute in Montreal Sept. 8.

The board is composed of 12 governors, six from the United States and six from Canada, and in their selection care has been taken to maintain a balance between world-famous scientists and men with administrative capacity. Governors to represent Newfoundland and Greenland will be named later.

Formation of the board is an obvious development of the tremendous interest in the Artic Circle regions of North America which has been accentuated by the war. The Alaska Highway; the development of the oil fields at Fort Norman, and the establishment of airfields at Churchill, on Southampton Island, on Baffin Island and in Greenland have directed attention on the little known lands in the Arctic and even in the sub Arctic.

Four of the governors have been named for three years, four for two years and four for one year, so a third of the board will be named each year.

Appointed for three years were: Major R. F. Flint and Dr L. M. Gould, both of the National Research Council of the United States, Arctic, Desert and Tropic Information Centre, New York; Dr. E. M. Hopkins, president of Dartmouth College, Hanover, N.H.; Dr. H. L. Keenleyside, Ottawa.

Two years: Philip Chester, general manager, Hudson's Bay Company Ltd., Winnipeg; G. R. Farkin, Sun Life Assurance Company, Montreal; Dr. Philip S. Smith, Alaska Division, United States Geological Survey, Washington; Dr. V. Stefansson, Arctic explorer, New York.

One year: Dr. Charles Camsell, Deputy Minister of Mines and Resources, Commissioner of Northwest Territories, Ottawa; Dr. H. B. Collins Jr., acting director, Ethnogeographic Board, Smithsonian Institute, Washington; Dr. Robert Newton, president of University of Alberta, Edmonton; Walter S. Rogers, director of the Institute of Current World Affairs, New York.

North America has been slow in its study of the Arctic. Following the death of Capt. Robert Falcon Scott of the Royal Navy after he had found the South Pole in 1912, British people provided a fund administered by Cambridge University which financed several young scientists who spent years in the North before the present war. In the 1920's Russia established the U.S.S.R. Arctic Institute which has done valuable research work.

For the present the headquarters of the North American Arctic Institute will be located in Montreal.

Canadian Northwest Expected To Become Major Mineral Area

By C. Norman Stabler

Financial Editor New York Herald Tribune

North of parallel 60 is perilously close to the Arctic Circle. There you can have your dogs shoo away the polar bears and the caribou and then step into a hotel where you can rent a pleasant room for $3, get a steak dinner for $1 and a bottle of American beer for 35 cents. This district, the Northwest Territory of Canada, contains more than a third of the dominion's square miles. In it the mining of gold, radium, platinum, silver, lead and iron, plus a few more of the minerals needed by man, is progressing in a manner that befits the modern age.

The lonely prospector, the sourdough of '49 in this country, put down a few gold nuggets on the bar and, aided by some tall tales, persuaded the proprietor to grubstake him for another search into the mountains. In the lonely reaches of northern Canada today, where only 5 per cent of the territory has been explored, the descendants of our Forty-niners are attacking the same problem but with vastly different equipment.

Some of them penetrated the territory by airplane. Others got there when the government spent $130,000,000 on the Canol oil project. In any event they and some of Canada's geologists and, lest we forget, some Wall Street men, think that after the war this area of the earth's surface will give forth some results which will make it one of the leading mineral assets of the world.

Yellowknife Gold Output Heavy

Many of their claims will have to wait until after the war to be proven or disproven. But a few facts stand out. The Yellowknife district, for instance, exceeds 2,000 square miles, and only fifty square miles of it has undergone detailed prospecting. Yet it has produced $14,000,000 in gold since 1938, $4,000,000 of it in the peak year of 1942 before labor shortages caused a reduction in operations.

The territory, in addition to gold, contains radium, uranium and tin. On one of the properties of the Bear Exploration & Radium Co., prospectors have found indium, which is a rare metal that sells for about $12 an ounce.

Mining operations have been slow during the war, but not because of any efforts by the government to reduce them. The problem has been one of labor, and after the war Canada looks to this district to help solve any unemployment problems tht may develop.

All's Well in Frozen North

MONTREAL, Oct. 1 (CP).—The Nascopie came back from the north today to report "a fine trip" and everything well with residents of Canada's outposts high above the Arctic Circle. The Hudson's Bay Company ship completed her three-month, 12,000-mile jaunt with hardly a hitch and right on schedule.

ARCTIC INSTITUTE OF NORTH AMERICA

A MEETING of Canadians and Americans interested in scientific research into Arctic problems met in Montreal on September 8 and completed plans for the early establishment of an Arctic Institute of North America, first reported in SCIENCE in May of this year. The project was initiated at a similar meeting held in New York on May 13.

The thinking of the organizing group has been broadly as follows:

Wide interest in the Arctic is being expressed at present in both Canada and the United States and a strong scientific and developmental movement in Arctic North America is expected to begin as soon as the war is over.

Despite the excellent reconnaissance studies accomplished by a number of exploring expeditions, our detailed scientific knowledge of Arctic North America is comparatively slight. As a result the natural resources of Alaska, Arctic Canada and Greenland are far from completely developed, and full advantage has not been taken of the possibilities for living in that region.

The situation in the far northern part of this continent to-day is analogous in some respects to the situation in the undeveloped West in the middle of the last century. Many basic questions about the West were answered by the reports of scientifically organized surveys and by private exploration undertaken at that time in response to a widespread demand.

Questions of basic importance in a number of scientific fields can be solved only through studies undertaken in the Far North. Furthermore, carefully chosen scientific study can furnish a sound basis for the thoughtful planning upon which the development of North America's last frontier, the welfare of the people who live there now and the larger number of people who may be expected to live there in the future, should be built. A new, extended and independent program of scientific study of the North American Arctic therefore will not only contribute in a large way to the advancement of scientific knowledge, but will also constitute a broad public service of immediate practical significance.

The organizing group believes that such a study should be integrated with studies already under way and should be systematically designed to answer the major questions that must be answered before intelligent and orderly development of the Far North can be undertaken. It would necessarily involve:

(a) General research into the natural conditions of the North.

(b) Studies applied to specific problems of the development of the Arctic and of Arctic living.

(c) A broad study of the relationships of the Arctic regions to the physical, social and economic problems of the world as a whole.

It is intended that the scope of activities of the institute will include the collection and diffusion of information relating to the Arctic and Subarctic regions of North America. The work will be exclusively scientific. Fields of pure and applied research may include geologic studies; physical and chemical studies relating to geophysics, oceanography and meteorology including ionospheric and related phenomena; broad biological studies including animal and timber resources; social studies of the region including the history of early man in North America; agricultural possibilities; navigation, transport and communication; public health.

A constitution and tentative budget have been adopted. It is expected that the institute's personnel will consist of a small, full-time administrative staff headed by a director. An international group of men, many of them scientists, elected on a rotating basis for specific terms, will meet periodically with the full-time staff to consider specific research projects and to advise on the distribution and coordination of research effort. It is hoped that sufficient funds will be available to make, each year, a considerable num-

Canada Is Taking Over Airports Built by U. S. in Joint Defense

Deal Involves Bases in Labrador, Quebec, Baffin Land and Hudson Bay—Cost of Transfer Is Set at $111,411,551

By P. J. PHILIP

OTTAWA, Aug. 1—At a cost of $76,811,551, Canada is taking over the two chains of airfields built by or in conjunction with the United States as a measure of continental defense in the war, Prime Minister W. L. Mackenzie King announced today in the House of Commons.

This country will at the same time assume the cost of $29,600,000 for work done on the United States account and another $5,000,000 for a projected improvement program on the northwest staging route.

In making this announcement and tabling the notes exchanged between the two Governments, Mr. King said there were two considerations that had governed the Canadian decision.

"In the first place," he said, "it is believed that as part of the Canadian contribution to the war this country should take general responsibility for the provision of facilities in Canada and in Labrador required for the use of Canadian, United Kingdom and United States forces. In the second place, it was thought that it was undesirable that any other country should have a financial investment in improvements of permanent value, such as civil aviation facilities, for peacetime use in this country.

"I am happy to say that our views on this subject were understood by the Government of the United States and this agreement is the result of this understanding."

It is generally recognized here that many of these wartime airfields and routes on which the money was spent will be of no great practical value to Canada. In some cases they duplicate existing facilities and in others the increased range of airplanes has made them unnecessary. The Hudson Bay route to Europe with stations at The Pas, Churchill, Southampton Island, Frobisher Bay in Baffin Island and Fort Chimo, Quebec, which cost $34,666,100 in American and $1,253,850 in Canadian funds, has scarcely been used even during the war and is considered unlikely to be of any value.

A new airfield constructed by the United States at Mingan, Que., for which $3,627,890 is being paid, so closely duplicates an existing Canadian airfield that one or the other is likely to be dismantled.

Including its own outlay on all these works, Canada is paying a total of $120,000,000. Canada, however, it is argued, by reimbursing the United States for all outlay on permanent works, has secured an independent position on the northern routes to Europe and Asia.

Mr. King's announcement disclosed for the first time to the public the extent of the development of northern airways to Europe and Asia. Expenditures on the northwest staging route reached over $37,000,000 American and $23,000,000 Canadian dollars.

For the flight strips along the Alaska Highway, the Mackenzie-Athabasca air route and the telephone-telegraph-teletype line from Edmonton to the Alaska border, Canada will pay nearly $14,000,000.

The middle route through the Pas, Churchill, Southampton Island, Frobisher Bay in Baffin Land and thence to Greenland and Iceland was originally designed, it was said, for fighter planes on their route to Britain as it provided frequent landing places. It was admitted, however, that the weather had made this route very uncertain and the conquest of the submarine rendered it almost unnecessary.

The main line to Europe has been through Goose Bay, in the interior of Labrador, on which the Canadian Government has a 99-year lease from the governments of New Foundland and Great Britain, with the provision that it should be available to the Royal Air Force and the United States Air Forces for the duration of the war and for such time thereafter as the parties might agree to be necessary.

The question of the civil use of this great station was reserved for settlement after the war. Constant increase of the facilities at Goose Bay, Mr. King said, permitted a steadily increasing flow of aircraft and was partly responsible for the abandonment of the plans for the development of the Hudson Bay route.

It is understood that a group of Canadian experts will shortly visit the five air fields in the Hudson Bay area to report on the extent to which they can be utilized. The largest of these are at Churchill, where a large air field was leveled and a number of buildings, erected at a cost of over $6,000,000, and at Fort Chimo, where the sum of over $8,500,000 was spent.

Neither of these air fields, it is considered here, will be of any practical use for civil aviation. At Churchill, over $3,000,000 was spent on troop housing facilities and buildings, and at Fort Chimo, on the northern shores of Quebec Province, these same items cost over $1,000,000.

The cost of the telephone-telegraph-teletype line from Edmonton to the Alaska boundaries was listed in the exchange of notes between the two governments as $9,342,208.

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ber of research grants to qualified scientists irrespective of their principal professional affiliations.

The institute will be clearly North American, international in character and common to Canada, the United States, Newfoundland and Greenland. Within the North American Arctic the boundary between Alaska and Canada is entirely artificial, while that between Canada and Greenland is hardly less so as far as Arctic research is concerned. The basic scientific questions to be answered are common to the entire Arctic region. Accordingly, great economy of effort, avoidance of duplication of investigations and wider common discussion of problems would be secured by treating the North American Arctic as a region to be studied as a unit—the study to be for the common good of the people and states concerned. Such a unit treatment, if properly organized and administered, should have the further advantage of contributing largely to international good-will through a new kind of direct international cooperation.

It is expected that the offices of the institute will be established in Canada, probably in Montreal.

Funds for organizational expenses, pending the establishment of the institute as a research organization, have been generously contributed jointly by the National Research Councils of the United States and Canada.

The following persons were present at the recent organizational meeting:

Dr. A. Bajkov, Army Air Forces Personal Equipment Laboratory, Wright Field, Ohio.

Dr. E. G. Bill, Dartmouth College, Hanover, N. H.

Dr. S. W. Boggs, Chief, Division of Geography and Cartography, Department of State, Washington.

Dr. R. W. Boyle, National Research Council of Canada, Ottawa.

Dr. C. Camsell, Deputy Minister of Mines and Resources, Ottawa.

Dr. H. B. Collins, Ethnogeographic Board, Smithsonian Institution, Washington.

Dr. H. J. Deason, special assistant to the director of the Fish and Wildlife Service, Department of the Interior, Washington.

Major R. F. Flint, National Research Council of the United States; Arctic, Desert and Tropic Information Center, Army Air Forces, New York.

Dr. L. M. Gould, National Research Council of the United States; Chief of the Arctic Section, Arctic, Desert and Tropic Information Center, Army Air Forces, New York.

Group Captain W. F. Hanna, Department of National Defence for Air, Ottawa.

Dr. D. Jenness, Department of Mines and Resources, Ottawa.

Dr. H. L. Keenleyside, Department of External Affairs, Ottawa.

Dr. T. Lloyd, Department of Geography, Dartmouth College, Hanover, N. H.

Commander D. B. MacMillan, USN. Hydrographic Office, Washington.

Dr. R. Newton, President of the University of Alberta, Edmonton.

Dr. J. J. O'Neill, Department of Geological Sciences, McGill University, Montreal.

G. R. Parkin, Sun Life Assurance Company of Canada, Ltd., Montreal.

Commander G. A. Patterson, USN. Hydrographic Office, Washington.

Dr. V. Stefansson, 67 Morton Street, New York.

Lt. A. L. Washburn, Arctic Section, Arctic, Desert and Tropic Information Center, Army Air Forces, New York.

Ensign J. C. Weaver, USNR, Hydrographic Office, Washington.

Col. J. T. Wilson, Director of Operational Research, National Defence Headquarters, Ottawa.

Dr. V. C. Wynne-Edwards, Department of Zoology, McGill University, Montreal.

Until further announcement, communications should be addressed to L. M. Gould, Carleton College, Northfield, Minnesota.

YALE UNIVERSITY
(On leave of absence)

RICHARD FOSTER FLINT
SCIENCE,
SEPTEMBER 29, 1944

Perpetual Night No Bar To Navy Alaskan Flight

SEATTLE, Wash., Nov. 24 (AP)—The Navy is making a daily flight over trackless tundra and a mountain range to Point Barrow, Alaska, 400 miles inside the Arctic Circle.

Capt. D. L. McLennan, a former fullback at Washington State College, is captain of the flight, which supplies Navy Seabees who are surveying the naval oil reserve in the area.

It's always night at Barrow now, Captain McLennan said, here for a repair job in his plane, so "you go by dead reckoning."

"And," he added, "there's just one weather forecast—it'll be worse in five minutes."

AMERICAN AIR MIGHT WAITING TO BE FLOWN TO OUR ALLIES ON THE RUSSIAN FRONTS

Fighter planes at Ladd Field, Fairbanks, Alaska, from where they are ferried to Siberia by Soviet pilots

31 Alaska Big-Plane Airports

The Christian Science Monitor

ANCHORAGE, Alaska — The Civil Aeronautics Authority has constructed 31 Far North and Far West airports in Alaska that are large enough to handle any plane now in the air or yet on the drawing boards," it was reported here recently by Marshall C. Hoppin, CAA superintendent for Alaska.

Mr. Hoppin issued his report, his second statement on war development of aviation, coincidental with the Army's release of information covering the movement of 5,000 military planes to Russia by way of Fairbanks, Nome, and the Bering Straits.

While withholding data on use of the air lanes, Mr. Hoppin said that Alaska, exclusive of the bristling Aleutian Island chain, has 8,165 miles of Federal airways available for postwar use, complete with radio ranges, weather reports, and point-to-point flight information as is provided in the States.

"When the present program is completed," he said, "facilities will be available for any type of commercial air operations. We will expand instead of reducing these facilities after the war."

Since 1939 when the program began, 13 major airports and 18 intermediate landing fields have been built by the CAA, exclusive of many built by the Army in the Aleutians. The intermediate fields could be classed as major airports, he said, with no runways less than 5,000 feet in length or 300 feet in width, ranging up to 600 feet.

Pointing to the keen interest in postwar aviation over Alaska to the Orient, Mr. Hoppin said all the fields were built to be of commercial as well as military use.

SEES NEED OF MORE ARCTIC OBSERVERS

Kansas City, Aug. 29 (A. P.).—The United States, which wants a leading role in post-war, world-wide aviation, has but one weather observer in the arctic, while Russia has eighty, declares Edward J. Minser.

That's the reason the Weather Bureau needs more appropriations, said Mr. Minser, chief meteorologist for Transcontinental & Western Air, in his testimony yesterday before a United States House of Representatives subcommittee on aviation.

Observation stations must be increased in the Far North, he insisted, for it's there that many storms are born, and data from there are essential if the United States is to lead in the switch from around-the-world to over-the-top-of-the-world flying.

U.S. Reveals Alaska Route For Planes Sent to Soviet

Half of 10,000 Total Flown Over in North With Few Losses

EDMONTON, Alberta, Aug. 1 (CP).—Secrecy that has cloaked the mass movement of war planes from the United States to Russia over the Canadian-Alaskan route was lifted today after nearly two years of the heavy lend-lease traffic.

It was learned from American military sources here that approximately 10,000 American-built planes have been sent to Soviet war fronts since the fall of 1941, about half of them being flown via Edmonton and Fairbanks.

A stream of 2,200 planes has gone to the Russia fronts over this route in the first four months of 1944 alone, it was reported.

Officers said losses have been few. (At Seattle, Representative Warren G. Magnuson, of Washington, said operational losses had been held to "an almost unbelievable minimum" despite "terrific cold-weather hazards.")

The Russia-bound planes follow a route to Alaska pioneered by Canadian airmen and developed by Canadian engineers. American ferry pilots fly the ships from Great Falls, Mont., to Fairbanks. The Russians take over at Fairbanks and fly to Siberia via a 540-mile leg to Nome, on the Bering Sea. The Great Falls-Edmonton hop is 600 miles, Fairbanks is nearly 1,000 more.

Russian airmen have been seen frequently here and have been acclaimed at public gatherings. Russian women also have participated in the flight from Alaska, but none has been seen here.

Airplane Joins Worker and Factory To Complete Alaska Salmon Pack

The Christian Science Monitor

ANCHORAGE, Alaska – The day has come when the cannery worker is so important in the food-production picture of the nation that he is moved from one job to another, perhaps thousands of miles away, by airplane.

Such a movement, on a mass scale that had all interior Alaska air lines loaded to capacity, took place at the Bristol Bay salmon grounds, one of the richest in the world. The pack of more than 1,000,000 cases was excellent, but 318,000 cases (48 cans a case) below 1943, which was a high for five years.

About $1,750,000 was paid out to fishermen and plant workers during the 25-day season. In addition, 800 of their number were provided air transportation through here en route to their homes in southeastern Alaska, in the States, or to jobs in the former region. Some 500 others living along interior rivers flew back to their homes.

Demonstrating the importance of the time element to the fishing industry, a 5-day strike at the outset of the season over interpretation of the working agreement cost an estimated 200,000 cases of salmon. W. C. Arnold, attorney for the industry, said each fisherman lost about $500 because of the strike. Average fisherman earnings were between $2,000 and $3,000 for the 25 days.

U. S. Goods Flown to Russia

Lend-Lease Supplies Are Ferried via Canada and Alaska

EDMONTON, Alberta, Dec. 6 (CP). — American-built planes, which have been passing through here every day in the week, bound for Russia, have been carrying large quantities of lend-lease supplies for the rehabilitation of Russia and Europe, United States officials have disclosed.

That planes from the United States were being ferried to the Russian front via Canada and Alaska was disclosed months ago, but this is the first time it has been reported that supplies are being carried as well.

The air movement has included seed wheat, tractors, farm implements, rubber plant seeds, serum, sulfa drugs, surgical instruments and medical supplies.

10,000 Bees Fly to Alaska

An army of 10,000 honey bees made a 2,270-mile combined rail and air express trip recently from Redding, Calif., to Fairbanks, Alaska, reports the Railway Express Agency. The bees, housed in four fine screen containers, weighing thirty-seven pounds, traveled by rail to Seattle, where they were placed aboard an international air express plane to fly the final lap to Fairbanks.

Northwest Passage

By Richard L. Neuberger

FOR MORE THAN 300 years the prospect of navigating the Northwest Passage has fired the imagination of adventurous men all over the world. Henry Hudson and his son perished in 1611 trying to find the fabulous route which linked the Pacific and Atlantic Oceans via the roof of North America.

A few weeks ago the first round-trip journey through the Northwest Passage was completed at the British Columbia seaport of Vancouver. A little 105-foot schooner, the Royal Canadian Mounted Police patrol boat St. Roch, came up Burrard Inlet and eight red-coated Mounties went ashore.

Behind the St. Roch was nearly four years of voyaging in the ice-locked waters off the northern shores of the continent. The tiny ship left Vancouver in 1940 and negotiated the Northwest Passage from Pacific to Atlantic in 28 months. Then she made the return trip, again braving the ice pack which fringes the gables of North America.

This was the most important exploration to take place since the war began. At any other time, except at the height of a global conflict, it would have stirred the civilized world.

FOR CENTURIES the classic route connecting the Atlantic and Pacific Oceans was the perilous journey around the tip of Cape Horn. But early in the present century the Panama Canal was completed. Still a third route remained—a route which was yet to be used. This route was the Northwest Passage, the legendary seaway linking the oceans via the Arctic.

The round-trip voyage of the St. Roch, the first such argosy in history, has demonstrated that perhaps steel ice-breakers can be used to crack open the Polar ice pack and establish a great new sea lane. When the little schooners came up Vancouver harbor, dreadnoughts dipped their colors in salute.

Fittingly, the skipper of the St. Roch was born in Norway, home of many great Arctic explorers. Henry A. Larsen, who wears the four chevrons of a staff sergeant on his scarlet tunic, grew up a few miles from the birthplace of his hero, Amundsen. Amundsen's tales of the Polar regions inspired in him an ambition to explore the Northwest Passage. He crossed the Atlantic, became a naturalized Canadian and joined the Royal Mounted.

As a member of "G" Division, which patrols the North from Hudson Bay to the Alaskan border, Larsen sailed the St. Roch north to deliver supplies to the far-flung Mounted Police outposts near the mouth of the Mackenzie River. In 1940, S. T. Wood, commissioner of the famous red-coated force, gave Larsen his chance to poke into the Northwest Passage.

The first voyage lasted almost 2½ years. It locked the St. Roch in the ice pack during a pair of savage Arctic winters. Many times huge icebergs and floes threatened to crush the boat like an eggshell. But always its timbers of Douglas fir and its sheathing of Australian "iron bark" held firm. One member of the crew, Constable Albert Joseph Chartrand, died of heart failure when the temperature dropped to 60 degrees below zero and stayed there for weeks at a time. He was buried beneath a lonely rock cairn overlooking Pasley Bay.

SERGEANT LARSEN and Constable P. G. Hunt mushed across the ice for 41 days studying the movement of the pack. The weather was never warmer than 48 below. They visited remote Eskimo tribes and took a census among these most far-flung of all the inhabitants of North America.

With blasting powder and ice chisels, the crew of the St. Roch pried their schooner out of the pack during their second August in the Arctic. A few rods at a time, dodging floes and keeping out of blind leads, they snaked and twisted the St. Roch through the labyrinth of islands which lie northwest of Hudson Bay, where their historic predecessor whose name the bay bears had met his death.

They finally came down the bleak coast of Baffinland and so at last ended their voyage at Halifax. Having traversed the forbidding Northwest Passage from west to east, Sergeant Larsen sought permission to attempt the return journey. This time it required not 850 days, as had the cruise from Pacific to Atlantic, but a mere 86 days. Less than three months out of Halifax, the St. Roch cruised along Alaska's fjords and entered British Columbia waters.

Knowledge gained on the first trip enabled Larsen and his men to complete the return voyage in one-tenth the time, for they knew the soundings and the shifting movements of the ice pack.

This argosy by eight Mounted Policemen may bring about a new era in the development of the Far North. For many years Dr. Vilhjalmur Stefansson has been agitating for the opening of the Northwest Passage. He has pointed out that ever since 1920 the Soviet Union has made considerable use of the Northeast Passage, which lies along the northern shores of Europe and Asia. Much commerce has been carried through the Northeast Passage between the mouths of Siberia's great rivers such as the Lena, Ob and Yenisei.

Dr. Stefansson also has cited the fact that transportation between the North Pacific and North Atlantic would only be one-third as long via the Northwest Passage as via the Panama Canal. Perhaps in the future the furs, timber, minerals and other products of the Mackenzie and Yukon Basins can be freighted through this new seaway opened by the St. Roch.

"The route through the Northwest Passage," says Sergeant Larsen, "is suitable for summer traffic by wooden vessels and of course by steel vessels. It has many postwar possibilities."

THE DATA and information acquired by Larsen and his seafaring Mounties was a factor in the recent establishment at Montreal of the Arctic Institute of North America. This organization will include leading scientists, explorers and geographers of the United States and Canada. They will make studies of the Arctic regions of this hemisphere, with a view to development and possible settlement. Such men as Stefansson and Philip Chester of the Hudson's Bay Co. already have commenced to take part.

The twin voyages of the St. Roch will be analyzed in detail by the Arctic Institute. In the meanwhile, the little 105-foot schooner which has made history will return to duty as a patrol boat for the Royal Mounted. Her skipper will continue to be the Scandinavian-born sergeant, Henry Larsen, whose rugged frame, wrinkled face and blond hair make him a close replica of his hero and exploring predecessor, Roald Amundsen.

Boat Tops America in Season

VANCOUVER, B. C., Oct. 17 (CP)—The first voyage ever completed in a single season through the treacherous Northwest Passage across the Arctic top of America was triumphantly completed last night by the little Royal Canadian Mounted Police schooner St. Roch.

It was the third successful voyage through the route charted by Ronald Amundsen, famous Norwegian explorer, who laid out the course in a 36-month voyage from 1903 to 1906, sailing from east to west.

In October, 1942, the 80-foot St. Roch completed a west-to-east voyage through the passage in two and a quarter years. It started the return from Halifax, N. S., last July 22, and had expected to winter somewhere in the Herschel Bay region.

Good time, however, led the schooner's captain, R. C. M. P. Sergeant Henry A. Larsen of Vancouver, to push on through in the single year.

The voyage, he said, was a "perfect cruise," and added: "The route through the Northwest Passage is suitable for summer traffic by wooden vessels. The St. Roch was specially built to penetrate and withstand the pressure of the ice floes which close in on ships in the Arctic oceans."

The Army's Coldest Mission

War Materiel Tested in Arctic Canada

Dover, N. J., Nov. 30 (AP)—Thirty-seven soldiers and specialists were sent last year to the coldest area in North America to test materiel for the present winter campaign against Germany, it was disclosed today.

Col. W. E. Larned, commanding Picatinny Arsenal, said the party, including the explorer Sir Hubert Wilkins, was stationed five and one-half months in northern Canada "where the ice is 1,000 feet deep."

The Arctic testing station was maintained by the Ordnance Dept. from Oct. 13, 1943, to last Mar. 30 under temperatures from 18 to 67 degrees below freezing, with winds frequently reaching 50 miles an hour, Col. Larned said.

Leads to New Designs

Material tested included anti-aircraft directors and artillery, electrical generating units, clocks and watches, batteries and sighting and optical equipment. The tests led to new designs and maintenance techniques, some already in use, said Larned.

All Alaska Connected By Air With Seattle

NEW YORK, Oct. 23 — Announcement of commercial clipper air service between Seattle, Wash., and all cities in Alaska was announced here by Pan American World Airways System.

Two of the five Douglas DC-3s to be used on the route are expected to be put in service not later than Nov. 15, with the remaining planes to follow as soon as materials are available for their conversion.

Mt. McKinley in Alaska is the world's third highest point

Three German Arctic Expeditions Broken Up by U. S. Coast Guard

WASHINGTON, Dec. 14—Four Coast Guard cutters, penetrating into Arctic waters only a few hundred miles from the North Pole, destroyed three German expeditions to establish weather-reporting stations on the northeast coast of Greenland, the Navy reported today.

During the operations, which lasted more than two months from late summer into fall, sixty prisoners were taken, an enemy armed trawler was captured and two other German vessels were abandoned by their crews, one when it was cornered by the Coast Guard ships, and the other when it was trapped by heavy pack-ice floes. No casualties were suffered by the American task force, which consisted of the cutters Eastwind, Southwind, Northland and Storis.

Late in July the Greenland sledge patrol, composed of Danish nationals, discovered evidence of a German weather and radio station, and the Northland and Storis, bearing an Army combat group, sailed to the area of Cape Sussi. The base, hastily abandoned by the enemy, was burned.

Leaving the Cape, the Northland sighted a 155-foot German trawler, believed to be the Coberg, caught in the ice and entirely gutted by fire. Litter around the ship indicated the expedition had blown up the vessel and set up quarters on the ice. Parachute cylinders used in cargo parachutes suggested the men had been supplied for some time by air.

Almost a month later the Northland and Storis sighted an enemy vessel and a seventy-mile chase through great ice floes ensued as the German trawler twisted in intricate maneuvers to escape. As the Northland closed in, two explosions ripped the enemy craft. Three lifeboats, containing eight officers and twenty enlisted men, were taken aboard from the scuttled ship. The Storis, meanwhile, was successfully defending herself against a Focke-Wulfe twin-motored bomber, presumably dispatched from Norway.

Early in October the Eastwind landed two platoons of sailors on Little Koldewey Island, 800 miles below the North Pole. In a dawn attack they stormed a German radio and weather station set up on the island and captured three officers, nine enlisted men and a large amount of scientific and radio equipment.

Several days later, a scout plane reported to the Eastwind and the Southwind that a new 180-foot German armed trawler was in the vicinity. Sailing under forced draft, the Coast Guard craft caught the enemy vessel and attacked in the middle of the night. The enemy turned again and again in the swiftly moving ice to avoid the Coast Guard salvos, but she was finally brought to bay in a cul de sac of ice. The twenty members of the crew were captured and a prize crew placed aboard the surrendered German craft, called the Externsteine. The ship, equipped with de luxe radio and communication systems, was sailed to Boston, Mass.

During the campaign the Northland smashed its rudder fighting the ice packs and had to be towed more than 3,000 miles to its base.

WASHINGTON, Oct. 11—A German radio-weather station in Greenland, believed to be the last clandestine outpost the Nazis operated in that barren territory, was captured and knocked out of commission last week, an Army Air Forces spokesman revealed today.

Details of the latest Greenland skirmish were scant. The only information disclosed was that three German officers, nine men and a good deal of tactical, radio, scientific and ordnance equipment were captured; that the station is the last, so far as our military authorities know, that the Nazis were able to set up in Greenland and that it is "assumed" that the capture was effected entirely by Americans. It also is "perfectly reasonable to assume," the spokesman said, that the station had been in operation since early in the war.

BLITZ HITS ARCTIC POST

Wind Scatters Personnel at Greenland Base

SOMEWHERE IN GREENLAND (AAF Base Unit)—A recent "air blitz" on this northern outpost of the Army Air Transport Command inflicted casualties and damage, says an unofficial communiqué.

The old adversary, wind, zoomed on the base with gusts registering up to 105 miles an hour catching base personnel unawares and leaving some sadly disheveled GI's scattered over the landscape. A sergeant found himself pinioned against the side of a fuel tank; another found himself clawing the air at the edge of a deep fjord—he was rescued by a jeep; two Red Cross girls walking arm in arm were picked up a block apart, while two jeeps, parked together, were found at opposite sides of the airfield.

Cheers went up when enemy wind became a friendly zephyr, but no caps were thrown into the air. Few were left to toss, for they were scattered over the entire island, and quartermaster's first job was to requisition new headgear for members of the post who had been caught in the attack.

LONG-LOST PLANE SIGHTED

Machine Used in 1928 Ocean Trip Is on Arm of Greenland

The Stinson monoplane Greater Rockford, in which B. R. J. (Fish) Hassell and the late Parker Cramer attempted to fly from Rockford, Ill., to Stockholm, Sweden, in 1928, recently has been sighted and photographed from the air by United States Army aviators on reconnaissance flights in Greenland, it was learned yesterday.

Lieut. Col. Hassell now commands the North Atlantic Division Base of the Air Transport Command at Goose Bay, Labrador. Mr. Cramer was lost while trying to fly the Atlantic in August, 1931.

Short of gasoline, Colonel Hassell and Mr. Cramer on Aug. 19, 1928, landed the Greater Rockford on the Sukkertoppen ice arm of Greenland, instead of at the Mount Evans base of the University of Michigan Greenland Expedition, where they were supposed to refuel. For two weeks they wandered over icy wastes toward Mount Evans. Finally their smoke signals were seen and they were rescued by members of the expedition. The flight was one of the first explorations of the northern air route to Europe.

Frozen Mammoth Flesh Edible

Prehistoric woolly mammoths are said to have been found recently in such an excellent state of preservation in the frozen regions of Siberia that the flesh could still be eaten, according to Massachusetts State College.

Coast Guard

Coast Guardsmen from the Northland, in background, as they found an abandoned Nazi trawler, left, during the venture in which they foiled the foe's effort to establish a weather station there

Flying in the Sub-Arctic

The North Atlantic can be flown in winter thanks to weather science, our air bases and our Air Force; flight over Greenland Icecap.

By WATSON DAVIS
Science News Letter, December 9, 1944

Mr. Davis flew 6500 miles (37 flying hours) with a group of newspaper correspondents in an Army transport plane to see the North Atlantic Air Route to Europe.

➤ THE SCIENCE of weather, the skill of men, and the might of machines that fly have combined in the service of war to make taking off on the great circle route to Europe, via Newfoundland, Labrador, Greenland, or Iceland a rather routine departure, thrilling as it is to those who thus set sail.

For the Army Air Transport Command, North Atlantic Division, have made the northern air route east and west across the ocean a year-round operation with several dozens of transport planes alone daily clearing one of the largest and northern-most U. S. ports of aerial debarkation.

Weather men, served by a gigantic collecting net of observations on land, at sea, and in the air, have the last say as to when planes fly or when they must wait for safe flying. But even in winter there are relatively few delays.

So newspaper men may see for themselves how the job is done, a group of war correspondents accredited to this phase of the battle of transport visited Newfoundland, Labrador, Greenland, and Iceland. Peary, Nansen, Rasmussen, and other explorers of pre-air days would recognize the Arctic clothing issued them, but the giant C-54 with four roaring engines that carries them would be a strange sledge indeed.

As modern as the airplanes that fly is the weather forecasting that tells the pilots when, how and where they may fly in safety.

In Arctic and Subarctic Canada and up and down the east and west coasts of Greenland, the Army has its own weather observers who radio information supplements in the basic pattern of weather provided by the great meteorological system of the U. S. and Canada. So useful is Greenland weather that the Nazis not long ago established weather stations on Greenland's east coast and one of our pilots, Capt. Fred P. Koupal, led bombing flights against this invasion.

From key points such as Newfoundland, the tip of Greenland and Iceland, special weather-observing airplanes stab out for 700 miles over the ocean, sampling wind, temperature, barometric pressure, clouds, at the two-mile-high level outward bound and barely skipping over the waves on the return trip. This is as valuable as reports from several dozen reporting stations in an area that would otherwise be a blank. All planes on flights report weather regularly. Automatic feather-weight weather reporting radiosondes are sent aloft attached to balloons from land stations and there are surface ships whose function is weather observing.

All this complex system, knit together by radio, gives the ocean-hopping pilot almost a prescription for getting safely from where he is to where he is ordered to go. Weather thus helps air transport in what was once the remote north where weather was thought to be man's worst enemy.

➤ BW1, GREENLAND—Once one of the most remote parts of the globe, this Army Air Transport Command base on the tip of Greenland is now a mere five hours from that 42d Street and Broadway of the North Atlantic air route, Harmon Field on Newfoundland.

Our sturdy C-54 started out in the Newfoundland dawn and purred along with never a miss in its four engines, delivering us down the BW1 runway well before the long, slow sunset of the shortening subarctic winter day.

Were it not that this air route is used as a major artery for supplies, fighting craft and personnel for the war, this might have been a high epic of arctic adventure. Routine as the operation might be considered by the men who wear the wings, for war correspondents it still has all the high thrill of an unknown mission.

The ocean thousands of feet below seemed cold and choppy when we broke out of the fleecy clouds over which we had been riding. Were those white patches on the sea ice? Not yet, said those who knew. Behind us the sun cast a pink light over the clouds we had deserted.

The first little iceberg was like sighting a sought-for continent, soon to be melted in memory by great fleets of ice masses sedately moving south. A cloud bank on the eastern horizon set up the false cry of land, but finally the real solid mountains of Greenland's southernmost tip, Cape Farewell, did come into view, first sight of an ice-laden island continent.

Great rock masses, streaked with snow, rose out of the distance, and beyond there was the great sea of perpetual ice, the ice cap, like a relentless unbroken bank of solid clouds. Our course lay up the historically famous Tunugdliarfik Fjord, with the little town of Julianehaab seen below us near its mouth. The fjord was getting its early coating of winter ice that must in the not too distant future cut off the air base BW1 from the sea and make it accessible only from the air, which is of course the speediest and most comfortable method of getting in and out.

Little glaciers from the ice cap reach down little branches of the fjord, calving some baby icebergs. It is Land of Desolation, which is what John Davis in 1586 christened this region which that Icelander, Eric the Red, in 981 had called Green Land because he hoped that such an attractive name would make his fellow countrymen wish to settle there.

Yet when we reached the air base with its business-like barracks and Nissen huts, circled up one fjord and down another and felt the wheels of the airplane roll along the broad hard-surfaced runway, we felt that John Davis was far too pessimistic, even if the green of the hillsides is a little faint.

For there was an outpost of the ATC, with American soldiers welcoming ferry pilots, fighter and bomber crews and passengers alike. Here we found an overseas operation not too remote from the fighting fronts of sea and air.

It is a neat little colony, with exposed buildings held to earth by steel cables to withstand the tug of winds that sometimes blow 120 miles an hour and whirl the loose glacial stones and gravel into the air like bullets. Here is the main nest of Greenland's weather prediction and radio communications and the supply base for more remote air bases and weather stations up both the east and west Greenland coasts.

Except for its air links to Iceland east and the U.S.A. south, this is an isolated post, with no contact with Greenlanders —either Danes or Eskimos. A GI stationed here has practically no chance of seeing any of the people of Greenland, and officers who have to travel on business to Julianehaab, 50 miles away, or to some other place, such as Greenland's capital, Godthaab, up the west coast, are the only ones who are likely to see the natives.

A woman's voice is a rarity at BW1, with only its 15 nurses and six Red Cross girls, unless it is on a record that is played over the very popular Army radio station. One can not travel far from BW1, with its 10 miles of roads that lead nowhere else. Geography has put the rest of the world "out of bounds."

Across the fjord from BW1 there are ranges on which thousands of head of sheep graze summer and winter, we were told. One of the farms of famous Eric the Red is said to have been in the vicinity. Along the coast Greenlanders fish for cod. They raise vegetables in the short growing season, there are summer flowers in the frantic profusion of the Far North. But BW1 gastronomically is U.S.A. exclusively; it does not live on the country at all.

All BW1 is a creation of the past 2½ years. Even the oldest veterans here can not tell us who located and laid out the airport, which is not surprising since the tour of duty here is supposed to be 18 months at the most.

The soldiers here are pioneers of the air age, followers of the explorers of previous centuries and decades who by boat and dog-sledge probed the fjords and ventured at risk of life upon the ice cap.

Weather is still the determining factor in Greenland flying, but through winter as in summer the air routes are open a surprising part of the time.

Our party of war correspondents got in one day and out the next, thanks to the science of meteorology and aviation and a lot of fortunate circumstance.

➤ OVER THE GREENLAND ICE CAP—If we had been Nansen or Rasmussen in an earlier year, we would have been preparing for a year or so for what we are now doing—crossing the Greenland ice cap and cruising up the east coast of the land of snow and ice. And it would have taken us months instead of hours—if we had made it.

As it is, our Army Air Transport Command C-54 is flying over the great expanse of snow that covers a couple of miles depth of ice and we see below us immense crevasses, peaks of mountains submerged in ice and gigantic glaciers frozenly dumping icebergs into the sea. It is as easy as airline travel in the U.S.A.

The sun had not risen when our C-54 rolled down the runway at BW1, the ATC base on the south tip of Greenland. Down the fjord, climbing to gain altitude, we turned at the coast and started northeastward. Our climbing made the run rise over the mountain range eastward. Then it flashed brilliant light over the great plain of snow that is the ice cap. In the light of dawn it seemed smooth as a sheet, but the glancing sun rays showed great rolling waves in the snow which covers, scientists say, perpetual ice that is thousands of feet thick.

The sheer beauty of color and contrasts drives away any remembrance that men in airplanes have been forced down upon this ice cap and have returned to civilization only after many days or even months of strenuous rescue effort by air and by land.

We speed along, while Capt. Fred P. Koupal, veteran of Greenland army flying, points out the geography and the aviation features of this unusual snowscape.

Any geologist or geographer would give a good chunk of his life to have such an opportunity.

We reach and fly up the east coast of Greenland with its rugged mountains, seeming to hold back the ice. A score of glaciers are nestled in the valleys.

At one point the airplane dropped altitude and plunged up a fjord to waggle its wings at the soldiers gathered along the icy runway of the ATC west coast air strip, known as BE2, located 500 miles north of the south tip of Greenland, 35 miles northeast of Angmagssalik.

Then we go farther north, farther than most men ever get. We are crossing the Arctic Circle, that imaginary line on the earth's surface beyond which the sun never rises in winter and never sets in summer, 66 degrees 32 minutes north latitude. There during the few minutes in the Arctic is born a new flying organization—the Circle of Arctic Bluie—Bluie being the ATC way of saying "base" in Greenland. Our pilot, Maj. E. E. (Ernie) Dryer, duly initiates the travelers.

Our exploration of Greenland is ended and we head for Iceland some 450 miles away. A thousand years or more ago Icelanders traveled to explore and settle Greenland. We are determined to return the call in a modern manner.

Scientist Plans Museum Deep In Frozen Earth

Would Record Culture of Today in Siberia for Study of Future Ages

By Maurice Hindus

By Wireless to the Herald Tribune

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MOSCOW, July 21 (Delayed).—Professor M. Sumgin, a Russian scientist, has drawn up a plan for the establishment of a museum unique in the history of the world. It is to be a "frigidaire museum" for the generations of the far-away future—as far away as 10,000 years hence. It is to be built deep underground in the Siberian northlands where, some feet below the surface, the land is perpetually frozen.

The purpose of this museum is to preserve for future humanity as complete a picture as possible of the life and civilization of our times. Within its immense spaces will be deposited human bodies of various races; bodies of animals of many species; manifold objects of our everyday life, such as clothes, household utensils, furnishings and furniture, and also manuscripts by great writers and important historical and other documents of our age. In short, everything that will enable the scientist of the most distant future to reconstruct, not only our social life, but also physiological changes that may take place in the human heart and brain and other organs of the human body, as well as changes and transmutations in the animal world.

The idea for this museum came to Professor Sumgin in the course of his investigations in Siberia's perpetually frozen areas. Such areas of Rusian territory are immense—more than 3,800,000 square miles, or slightly larger in size than the area of the United States, including its territories and dependencies. The thickness of the frozen crust varies from 33½ to 1,312 feet. Within this crust have been found bodies of ancient prehistoric rhinoceroses, mammoths and more recent human bodies.

Long-Dead Prince Preserved

In the village of Beryozovo, on the Obi River in Siberia, the grave of Prince Alexander Davilovich Menshikov, once a favorite of Peter the Great, was opened ninety-two years after his burial. The frozen body was superbly preserved.

Aug. 8, 1941, on the banks of the Andyr River in Siberia, the waters washed bare an ancient cemetery in which were uncovered well preserved human bodies that had been buried in the seventeenth century.

In August of 1942, scientists excavated two remarkable old cemeteries in the neighborhood of Lake Alabach, near Yakuts. Here, in the summer, the ground thaws to a depth of a little less than six feet. Below this depth there is a crust of perpetual frost reaching down 700 feet. The excavated cemeteries date back to the middle and end of the eighteenth century. The graves were located on the borderline of perpetual frost, and the bodies and the burial accessories were in remarkably good physical condition.

Food and Clothing Found

One old Yakut's coffin was overlaid with logs that were topped with a thick layer of bark. The timber frame, within which the coffin was deposited, was built of thick wooden blocks. Nowhere was there any mark of deterioration in the timber. It was clear, bright, undried and stuck with icicles and ice crystals.

Inside the coffin, at the feet of the body, lay a saddle with a copper engraving of galloping horses. There were also a leather saddle bag bulging with horse meat, a flat copper kettle, a wooden spoon and three bark containers of butter, porridge and cream. The food was easily identifiable. The horse meat was slightly darkened in color. But the leather sack was in excellent condition.

The body of the old Yakut was covered with a wolfskin blanket which was undamaged, save that it lacked its original firmness. The fur-lined coat in which the body was dressed, the silk shirt, fur trousers, scarf embroidered with light blue and black beads, sable hunter's knife and the inside leggings of the boots showed no sign of their age.

Picture of Our Civilization

The lower part of the coffin rested five and one-third feet below the surface, which is the borderline of perpetual frost.

All excavations in the ancient burial grounds in northern Siberia demonstrate that even such comparatively shallow depths below the surface may keep human bodies, household utensils, clothes and other objects of everyday life well preserved for hundreds and even thousands of years.

Hence Professor Sumgin's ambitious project for a gigantic underground "frigidaire museum." This museum, it is hoped, will provide for humanity that may inhabit this earth thousands of years hence a fairly complete picture of the civilization of our times.

New Soviet Map Available

WASHINGTON—The first and only available modern detailed map in the country of Soviet Russia with place names in English has been announced by Dr. Gilbert Grosvenor, president of the National Geographic Society. Prepared as a supplement to the December issue of the National Geographic Magazine, the new map was a formidable task even for Geographic cartographic experts, whose charts now are widely used in the armed services and by Government agencies. Soviet Russia, Dr. Grosvenor points out, comprises nearly one-seventh of the earth's surface and embraces nearly one-twelfth of the human race.

Russians Build Nickel Empire In North Siberia

Norilsk, a City of Parks, Plants and Schools, Rises on What Was Wasteland

By Maurice Hindus

By Wireless to the Herald Tribune

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NORILSK, U. S. S. R., Sept. 29.—Norilsk is a town which few Americans have heard of, but to Russians it is now a symbol of man's triumph over nature in the Far North. This booming industrial community, the largest of its kind in the country, for some time has been supplying defense plants with invaluable metallurgical accessories.

It is a town of small cottages and giant factories. A railroad connects it with the port of Dudinka, on the Yenisei River, seventy-five miles west. There is a year-around air service from Krasnoyarsk, which, one thousand miles south, is the nearest link with the Trans-Siberian Railroad. The town has telephone communications with Krasnoyarsk and Moscow.

Norilsk has little parks, a permanent theater, an electric power plant, a football stadium, dance halls, motion pictures and lecture auditoriums. It has a college, a metallurgical school and a trade school which teaches seventy-one specialties. Yet it is in northern Siberia, near the seventieth parallel of latitude, in a land of perpetual frost or "frozen wastelands," as such regions were spoken of in the days before publication of Vilhjalmur Stefansson's "Friendly Arctic."

The summer here lasts no more than ten weeks. In the winter there is perpetual night for three months. For weeks the town often is swept by Arctic blizzards. Originally, because of the severe weather, the planning commission allowed sixty-seven workless days in the winter. Now, with new ways of coping with the winter rigors, only seven workless days are allowed.

The story of Norilsk demonstrates the strenuousness with which Russia has been pushing civilization to the Far North. It was in 1919 that Professor Vorontsov, a geologist, and a companion first came to the place where the town now stands. They studied the snow-covered mountains. The more they studied the more excited they became. Here was nickel and more nickel. They had stumbled on one of the largest treasure houses in the world. Side by side with nickel were coal, graphite and many polymetallurgical ores.

These immense riches, however, were locked in a land of perpetual frost. Few men had lived in the region. Hunters seldom trod its immense tundras. Fishermen seldom came to its many gleaming lakes. It was a wasteland.

Moscow acted with energy and speed. A stream of migration at once was started. Food and building materials accompanied the settlers. Cottages, shops and laboratories rose on the once barren tundra. Erection of the big nickel works began.

When the war broke out the need for nickel was so desperate that more settlers and more engineers were sent to Norilsk. Soon nickel was manufactured and sent to Ural and Siberian defense plants. Now the plant is practically finished.

For a long time shafts were sunk in the mountains and the ore was brought up in elevators. More recently engineers have been blowing up the upper crust of the mountains, reaching a depth of 260 feet, and the mining has been done in the open air. This method was found to be economical.

Norilsk is growing an increasing amount of its own vegetables. Because of the around-the-clock sunlight in the brief summer, plants grow fast. Tomatoes and cabbage are still too watery, but agronomists hope to reduce the water content to normal by means of new fertilizers.

CROPS IN COLD SIBERIA TOUGHENED BY SCIENCE

If the Narym territory, despite its rigorous climate and location north of the 60th parallel, can boast of yields creditable to many more temperate sections, this is due in great measure to seven years of work by four young agronomists, says the Soviet Information Bureau.

Headed by Kuzma Litvinchuk, scientists working at the Narym State selection station have developed dozens of hardy varieties of grains, vegetables and potatoes and made it possible to extend agriculture in this Siberian area, situated approximately in the latitude of southern Alaska and Hudson Bay.

New varieties of crops and a regime for tilling the soil developed by the experimental station have upset old ideas as to what can be grown under these conditions. Although a grain crop of 600 to 700 kilograms per hectare was considered good until recently, the experimental station has raised the average crop to 2,700 kilograms. The average achieved for vegetables is thirty-eight tons per hectare and for potatoes fifteen tons.

The Narym collective farms now have over 5,000 hectares sown to over twenty new varieties of wheat, barley, oats, buckwheat and other crops adapted to local conditions. Hardy tomatoes, watermelons and muskmelons, never grown here before, are other contributions made to northern farming.

Onions have also been added to the list of cultivated crops with the discovery that growth can be speeded up by soaking the seeds for eighteen minutes in water heated to 50 degrees Centigrade before planting. This causes them to sprout ten times faster and fits them into the short vegetation period of the Narym summer.

Hugh J. Lee, 73, Journalist and Explorer, Dies

Went With Peary on Three Expeditions; Became City Editor of 'Meriden Record'

MERIDEN, Conn., Sept. 30.—Hugh J. Lee, newspaper man and former explorer, died here today at his home of a heart ailment. He was seventy-three years old.

As a newspaper man, Mr. Lee had been city editor of "The Meriden Record," a morning paper, since 1917. As an explorer, he accompanied the late Admiral Robert E. Peary on three expeditions to Greenland on which Admiral Peary sought to cross the ice cap to the North Pole.

In 1892 Mr. Lee, who was twenty-one then, read of Admiral Peary's projected expedition for the next year and wrote to the explorer asking to be allowed to accompany him. The month of August, 1893, found him with Admiral Peary on the west coast of Greenland.

The winter of 1983-'94 was a hard one. When the trip across the ice cap to the North Pole was begun in March a series of violent storms forced the party back. The following August all of the party, except Admiral Peary, Mr. Lee and Matt Henson, a Negro, returned to the United States.

Crossed Inland Ice Cap

In the spring of 1895 the three men succeeded in crossing the inland ice, but lack of food and supplies prevented further exploration. Mr. Lee accompanied Admiral Peary again on two summer expeditions to Greenland in 1896 and 1897.

The latter journey served as a wedding trip for Mr. Lee and his bride, the former Florence Leonard. It was on these expeditions that Mr. Lee helped Admiral Peary gather the collection of meteorites which he turned over to the American Museum of Natural History in New York.

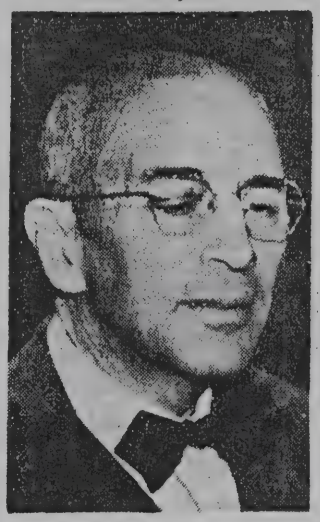
While Mr. Lee was with Admiral Peary, the Hugh J. Lee glacier, which flows into Independence Bay in Greenland, was named for him.

Mr. Lee entered newspaper work as a reporter for "The Meriden Journal" on his return from the 1897 expedition. But in 1902 he went north again, this time as superintendent of a reindeer herd at Cape Prince of Wales, Alaska, the westernmost point of the North American continent. Mr. Lee was appointed Deputy United States Marshal for Alaska in 1905 and served at Nome and St. Michael.

Offered Post as Editor

In 1917 Mr. Lee returned to Meriden on a visit. "The Record" offered him a job as city editor, and instead of returning north as he had intended Mr. Lee remained in Meriden to spend the rest of his life as a newspaper man.

Arctic Explorer



Hugh J. Lee

Mr. Lee was a native of Malden, Mass. He was a member of the Explorers Club and the American Polar Society.

Surviving are his wife, two sons, Hugh Wales and Robert Peary Lee, two daughters, the Misses Barbara and Helen Lee, and his mother, Mrs. Selena A. Lee, who is 101 years old, and lived with Mr. Lee in Meriden.

C. F. Anderson Dies; Handled Antarctic Mail

Went to Little America With Byrd to Cancel Special Stamps for Philatelists

WASHINGTON, July 22 (AP).—Charles Franklin Anderson, veteran postoffice employee who set up a postoffice in an Antarctic ice cave in 1934 while with the second Byrd expedition, died today. He was sixty-nine years old.

Was Philatelic Expert

Mr. Anderson was a friend of philatelists, and it was as an expert in philately that he was sent to the South Pole by the Post Office Department to set up a Little America postoffice and cancel all of the approximately 100,000 letters entrusted to the Byrd Expedition by stamp collectors.

Collectors sent letters under outside envelopes to the Byrd expedition in Washington, and for a fee of 50 cents each they were carried to Antarctica. There the outside envelopes were discarded and the return envelopes were stamped with the special Byrd expedition stamps, three cents United States postage, canceled with a special Little America cachet and carried back to San Francisco, whence they were distributed through regular channels to the individuals who had sent them.

He said he was forced to set up his post office in the science "hall" of the Little America base, a cave about 16 by 20 feet in size cut into the barrier ice 20 feet below the surface. When he tried to heat the room sufficiently to liquefy the canceling ink the ice overhead began to melt and he had to construct a "main line trunk sewer" of oiled paper to carry off the flow from 15 drips in the ceiling.

Anderson said that in his anxiety to cancel in Little America not only all the mail brought with him, but also the untouched remainder of the first batch of mail sent down with the expedition, he spent more than 20 hours out of each 24 at work and slept only 18 hours during his 16 days in Little America.

Philatelist

Charles F. Anderson as he appeared several years ago in Antarctic attire

DR. M. C. TANQUARY, ENTOMOLOGIST, 62

Minnesota Professor, Pioneer in Modern Beekeeping, Dies —Served With MacMillan

ST. PAUL, Minn., Oct. 25 (AP)—Dr. M. C. Tanquary, who pioneered the present commercial plan of bee-keeping—raising bees in the South and moving them North to do their work in the summer—died today at the age of 62. He had been Professor of Entomology and Economic Zoology at the University of Minnesota for the last sixteen years.

Dr. Maurice Cole Tanquary was born in Lawrenceville, Ill., received an A. B. degree from the University of Illinois in 1907, an A. M. in 1908 and a Ph. D. in 1912. He studied also at Harvard University.

In 1909-1912 he was assistant entomologist at Illinois, then going to Kansas State Agricultural College as instructor in entomology. There he rose to associate professor in 1918. Dr. Tanquary was Texas State Entomologist in 1919-1924, engaged in commercial bookkeeping in 1924-28, and joined the University of Minnesota faculty in 1928.

Three years, ending in 1916, were spent in the Arctic with the Crocker Land Expedition of Donald B. MacMillan, on which a 1,300-mile trip by sledge across Melville Bay and through Danish Greenland was made. Many zoological, geological and botanical specimens were collected on the expedition for the American Museum of Natural History.

Dr. Tanquary was an authority on insect embryology and behavior, control of economic insects and bee-keeping. He was one of a group of researchers at the University of Minnesota which announced in 1941 that dark-colored honey apparently contained more dietary minerals than the light-colored kind, and that unfiltered honey was more healthful than the filtered variety.

Haig-Thomas May Be Dead.

London, July 7 (A. P.).—David Haig-Thomas, explorer, who led an expedition to Ellesmere Land in the Canadian Arctic in 1937-38, and spent a year among the Eskimos, is missing in action in Normandy and is believed to have been killed, it was announced today.

Sister of Arctic Explorer Dies

CALGARY, Alberta, Sept. 9 (Canadian Press)—Mrs. Inga Thorlakson, a sister of the noted Arctic explorer Vilhjalmur Stefansson, died at her home here yesterday. She was born in Iceland seventy-nine years ago.

To Study Northern Canada

HANOVER, N. H., Oct. 26.—Dr. Trevor Lloyd, professor of geography at Dartmouth College, has received special leave of absence for a year to undertake a war-time assignment for the Canadian government in Godthab, Greenland. Study of the North American Arctic region has been one of Professor Lloyd's special interests, and he is preparing a report for the Canadian Institute of International Affairs on the post-war development of northern Canada.

Danish Patrolman Given U. S. Award

WASHINGTON, July 19 (AP)—The posthumous award of the Legion of Merit to Patrolman Eli Knudsen, Danish member of the Greenland Sledge Patrol, was announced today by the War Department.

Knudsen was killed March 26, 1943, in a surprise encounter with a patrol of Germans from a small group of the enemy which landed on Northern Greenland to set up a weather station. Knudsen and two other patrolmen had been watching the Germans for several months.

Science: Arctic Ice May Move South

Hot Spell Here May Be Sign of Climate Change

Mediterranean and Sahara Regions Called Possible Site of the Next Ice Cap

By John J. O'Neill
New York Herald Tribune

Hidden behind the prolonged dry torrid heat which smashed temperature records through the Middle Plains states, through the Ohio Valley and up to New England during this summer may be the transition to a new type of climate for the whole Northern Hemisphere and perhaps the entire earth.

Weather bureau officials, limited to day-by-day reports and short-range forecasts of the weather, have nothing to say about this larger aspect of the weather change, but the weather maps reveal a change which may be of tremendous importance in so far as it may be an indication that the North Pole ice cap is in process of moving to some other part of the earth.

The atmospheric mechanism which has produced the ice barrens of Greenland and the Arctic regions recently has disappeared from the weather map. The chief indicator of the ice-making process was the extensive permanent high-pressure area centered over Greenland, with smaller satellite areas north of Alaska and of the Siberian region. This high-pressure area was a funnel through which the excessively cold heavy air in contact with the stratosphere flowed downward to the surface, solidifying all moisture in the lower air layers with which it came in contact and depositing it as an ever-thickening ice cap of the earth.

Atlantic Pressure Area Growing

Where did the ice maker go? There is a mystery. There are, however, some clews, and the evidence supporting them contains some very interesting and extremely important possibilities. Another, smaller permanent high-pressure area lying athwart the Atlantic Ocean in the latitude of the Bahama Islands has increased its pressure and greatly enlarged its area. From a relatively small, egg-shaped area in the middle of the ocean it has become greatly elongated, and with increased strength from a mysteriously-obtained increase in pressure it has extended itself from the Florida, Georgia and South Carolina region (which has had a cool summer) across the ocean in a somewhat broader than usual band through northern Africa and the Mediterranean Sea and as far as Persia. This region may contain the site of the next ice cap of the earth.

The Mediterranean and Sahara Desert regions may now be going through the process of being transformed into an Arctic region, and the present Arctic region around the North Pole may be disappearing, to be replaced by a region with a tropical or semi-tropical climate such as existed there a long time ago. It has been known for years that the edges of the ice cap in Greenland have been retreating further inland all around its coast and that glaciers in Alaska and other northern regions have been similarly retreating.

This summer, storms which in previous years crossed the Atlantic south of the Gulf of St. Lawrence to the British Isles, are taking a much more northerly course and shooting into the heart of Greenland, carrying with them the dry, torrid air from the southwestern part of the United States which has given large portions of the United States the record-smashing hot summer. Instead of the former high-pressure area, Greenland, and the Polar regions in general, have a low-pressure area.

Hot Air Pouring Into Arctic

The former high-pressure area of great strength effectively blew back toward the south any storms carrying warm air that tried to invade the polar regions; now, with a low-pressure area existing there, the region acts like a deep atmospheric valley, and the hot air from the southern regions is pouring into the Arctic.

At the 10,000-foot level of the atmosphere these changes are even more definitely developed than they are on the surface. There are indications that this process of change may have been going on for many years without being detected and that this year's unusual weather results from the fact that a critical point in the process has been reached, after which a more rapid transition may ensue.

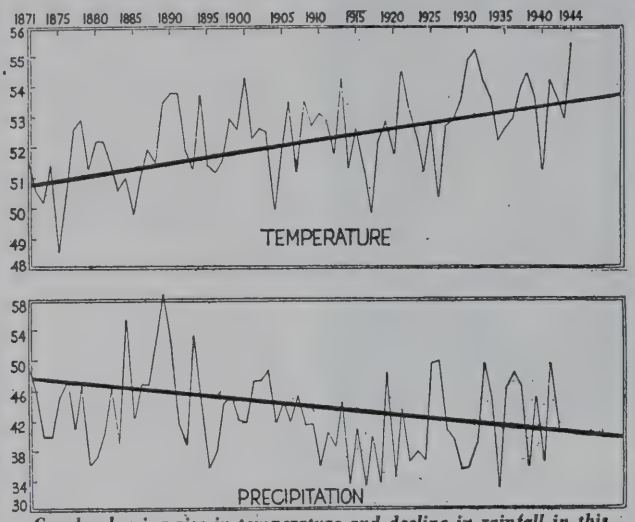
Official United States Weather Bureau statements from Washington ascribed the hot wave extending from the center of the country through New England to the stagnation of a high-pressure area over the southern part of the United States. Dr. Benjamin Parry, chief of the New York bureau, extended this explanation by pointing out this was a westward extension of the Bermuda high coming in from the ocean and that it deflected storms moving across the United States to a more northerly path. Contact with the Bermuda high squeezes the water out of the storms which is dumped on the Gulf states, so the storms move northeastward as hot dry structures.

2,000-Mile Trough Created

This condition has resulted in a trough, or about a 2,000-mile-long horizontal chimney, through which the hot dry air of the Southwest is carried across the country—and eventually shoots into Greenland to melt the North Polar ice.

New York's climate has been changing; it has been growing warmer. The city's annual mean temperature has been charted for each year back to the beginning of the Weather Bureau's records in 1874. The trend shows an increase of 2.7 degrees in seventy years. The precipitation was charted similarly, and this shows the region is getting dryer. The trend shows a decrease from 47.5 to 40.5 inches of annual rainfall in seventy years. This charting was done by the writer and is not an official Weather Bureau record.

These changes in the New York area are consistent with a long-range change in climate. Owing to existing conditions, very few data are available on the Arctic, but three recent charts show the low-pressure areas in the polar regions where permanent high-pressure areas formerly exsited, and the routine weather maps for the United States and Canada show the changed, more northerly storm tracks, and the warm air masses migrating to the pole.



Graphs showing rise in temperature and decline in rainfall in this area in last seventy years

Robot Weather Bureaus Aid Allies To 'Weather' Storm on Far Fronts

BALTIMORE, Md., Aug. 23 — Secretly located "automatic weather stations" in remote points from the Arctic to the tropics are playing a major role in co-ordinating Allied land, sea and air attacks with favorable weather.

Existence of these robot weather forecasters, developed by the Friez Instrument Division of Bendix Aviation Corporation to meet urgent wartime needs of the armed forces for world-wide data, was disclosed by the Company here today, with permission of the Army and the Navy.

According to A. C. DeAngelis, General Manager of Friez, the automatic stations were developed and placed in production by the Company within a year after the Navy requested such a device, and since then, complete automatic weather bureaus have been delivered to the armed forces on regular and increasing schedules.

The Navy wanted a device which automatically would report back by radio to official weather-control locations on conditions at remote points, and while Friez already had the necessary meteorological instruments, its engineers had to start more or less from scratch on equipment for power and timing of automatic radio devices necessary to broadcast reports and data continuously gathered by recording instruments.

Weather- and termite-proof insulated houses had to be developed to shelter the recording and radio instruments. For instance, weather in the English Channel originates around Greenland, so it was necessary to build automatic weather stations able to withstand the severe arctic climate of that region.

Other and equally difficult problems were surmounted by the Company's engineers in designing housing for stations used in regions where extremely high temperatures prevailed, but with all of this it took just about a year to produce the first automatic weather station and these stations, for the most part, require servicing only at intervals of several months.

Because the temperatures are so low and the summers are so short, there are said to be but two flowering plants in the Antarctic—one a type of grass, and the other related to the wild campion. By way of contrast, it may be mentioned that the same authority states that there are some 400 species of flowering plants in the relatively warm Arctic.

'Snow Jeep' Climbs Rockies In Training for Arctic Duty

BUCKLEY FIELD, Colo., Aug. 15 (AP)—Up where some of the world's worst storms are born, on top of 14,000-foot high Mt. Evans, the Army has unveiled the M-29 light cargo carrier.

The background of high-altitude lightning, torrential rain, snow and gale is the testing ground and the school ground. Here men train for the search and rescue of Allied fliers forced down in the desolate snow lands of the Arctic.

The M-29 is a track-tractor type of vehicle that will carry 1,200 pounds and tow a trailer or 50 men on skis.

It waddles on snow, as does a man on snow shoes. It clanks across and up granite mountainsides, in the fashion of a bulldozer. It swims, in the style of a duck.

It has proved its worth in Colorado. In mid-winter it fought its way up 11,000-foot-high Berthoud Pass, west of Denver, to rescue some 30 persons trapped by a blizzard that blocked highways. It also has rescued crews of planes that crashed in remote corners of the Rocky Mountains.

Russian advances of last winter undoubtedly partially were powered by the M-29; mountain fighters of Lieut. Gen. Mark W. Clark's Fifth Army in Italy probably are well acquainted with M-29.

Last winter Maj. C. A. K. Innes-Taylor, Arctic explorer of the Byrd expeditions and Belmore Browne, artist-explorer, took the M-29 on a 500-mile test trip through the Canadian Rockies.

"It demonstrated that machines will replace dog teams," said Major Innes-Taylor.

Giving newspapermen a test of the snow buggy, Major Innes-Taylor suggested some maneuvers on Mount Evans.

Rain is falling, mixed with snow. Up at 14,000 feet there is a deep snow field, even in August. The party heads for it.

Driver Bill Ford of Chicasha, Okla., demonstrates his confidence in M-29 by driving, at top speed, on the road's outside edge, to avoid rockslides and snowbanks. Stones kicked up by M-29's tracks are hurled over the precipice and land in the boulder fields 1,000 feet below. The snow buggy would do the same thing, carrying its six occupants with it, if the outer track jogged three inches out of line.

At the snow field everyone unloads. Driver Ford ties a couple of ropes, 50 feet long, to the controls of the snow buggy, as if it were a horse, with reins.

He throws in the clutch. The buggy moves slowly ahead. Mr. Ford follows, 50 feet behind, jerking first one rein and then the other. The buggy responds, as an intelligent horse would.

"The thing is guided easily this way," says Major Innes-Taylor. "The purpose of such control is to permit the vehicle to break its own trail, unoccupied. It may be followed by a train of M-29's. The first one may strike a crevasse, covered lightly by snow, and fall into it.

"If the man is behind, steering with reins, he, the other cargo carriers, and their crews, all escape disaster."

George W. Bettes of Sparta, Mich., a member of the American Polar Society, has developed a "Snow Jeep", which he writes weighs but 800 lbs. and is designed to carry two persons and tow a load on a toboggan over light, fresh, fluffy snow, where men can only travel with snowshoes. Mr. Bettes is shown standing deep in fresh fluffy snow while seated on the "Snow Jeep" on top of the snow is Capt. Kao Hwa-Lo, of the Chinese 5th army, who came to America to study the latest manufacturing processes.

Driver Plays Safe in Colorado Training

One advantage of the new M-29 cargo carrier, details of which are now disclosed by the Army, is its simplified controls, which permit the driver to steer with reins. If the machine falls into a crevasse, the driver is saved. One "Snow Jeep" breaks trails for a train of other machines. Mt. Evans (14,000 feet) in Colorado is serving as a testing ground for the tractor-type vehicle that will carry 1,200 pounds and tow a trailer of a half-hundred men on skis. Here men train for the search and rescue of Allied fliers forced down in the Arctic.

DEVICE DRAWS A MAP AS JEEP SPEEDS ALONG

WASHINGTON, Aug. 30—Facts about a new device which draws a road map while a jeep, tank or truck speeds along were revealed today by the Corps of Engineers of the Army.

Called the "odograph", and known as the M-1 automatic road reconnaissance device, it makes many of the maps which are vital to armies in the conduct of their operations. It consists of an electronic magnetic compass, a power pack, and a plotting unit which actually draws the maps, all interconnected by electrical cables and flexible shafts. The units are compact and can be mounted in the back of a jeep, inside a tank or on a truck.

In addition to its use for mapmaking, it can plot the position of objectives relatives to a given base, can tie gun positions together and can be used in land navigation, tactical reconnaissance and the tactical control of movements.

Field commanders, plotting a course, must know the distance traveled and the direction of travel. The odagraph determines the distance traveled by means of a speedometer, attached by a flexible cable to the vehicle transmission. Direction is determined by a magnetic compass corrected by an electronic unit so that the iron and steel in the jeep, tank or truck will not affect the compass. The factors of distance and direction are integranted mechanically in the plotting unit, passing the data through a "mechanical brain" to a plotting pencil which draws a map of the route traveled.

Evelyn Stefansson Rediscovers the Arctic

Evelyn Stefansson's modest and well illustrated new work, "Within the Circle" (Scribners, $2.50) is a kindling book about the Arctic. In it she virtually plays Columbus for stay-at-home Americans, rediscovering in print the fabulous wonderland that surrounds the Polar Mediterranean at the top of the globe. Like her famed explorer husband she is adept at exploding myths and skilled in the selection of materials. Her prose reveals enthusiasm, if not distinction. Her book will be enjoyed by teen-aged and adult alike for its clarity and color, its appeal to the imagination and the intelligence, its information, its stories and its challenge.

More detailed books (some by Vilhjalmur Stefansson himself) have been written about the world within the Arctic Circle, and many more will be written in the near future, but as a starter, as a kind of primer-pageant, Mrs. Stefansson's to our knowledge deserves to rank first in the field.

This is not just an escape book, though it has the allure of far places, strange peoples and exotic customs to pique the imaginations of the bored or burdened.

It is a book that will increase our geographical literacy. It tells us that the so-called Arctic Ocean is not an ocean at all, but a sea, "a real mediterranean sea almost entirely surrounded by land." It reminds us, too long students of maps drawn on a Mercator projection, that the world is round, that the shortest air route from Iran to New York is via Iceland, from Washington, D. C., to the Philippines via the Polar Sea at a point 300 miles north of the Arctic Circle and 100 miles north of northeast Siberia.

Thousands of our fighting men have already discovered that the Canadian, Alaskan and Siberian far North are destined to become the busy crossroads of tomorrow's air age. Many of them, drawn by adventure, the pioneer spirt and enticing industrial opportunities, will settle permanently within the circle, especially in Alaska, which has the resources to support a population of 10,000,000. The new slogan of enterprise may well be Go North, Young Man, Go North!

Like the author, increasing numbers of Americans are discovering that the ice-bound Arctic, with its few mosses and scattered blubber-eating Eskimos, is a folk-myth, pure and very simple. Within the circle they have seen movies, lakes, prairies and mushrooming cities, thousands of species of flowering and vegetable plants, dairy farms and butterflies, forests and iron mines so immense that they could supply the world's needs for centuries, scientists, teachers, doctors and agriculturists.

They have seen ice, of course, but they have had to defrost

Evelyn Stefansson

their imaginations to make room for a whole series of lively cultures, for a beckoning and incredible new frontier—parts of which have for years been socially far advanced beyond anything in the States. The airplane is confirming Stefansson's own great work with its carefully chosen title, "The Friendly Arctic."

Melting down erroneous preconceptions frozen for centuries in the human brain is no one-man job, but "Within the Circle" may start the process in many a reader's mind. The Arctic has been a kind of iceberg of ignorance, and we have been lazily content to go on mistaking the one-eighth that is visible for the whole subject; we have not bothered with the other seven-eighths. It is the seven-eighths that most of us have not seen that Mrs. Stefansson touches upon, sometimes with an all-too-tantalizing brevity, in the pages of her explorative volume.

She takes us first to Greenland, most forbidding of all the lands within the circle. Yet the 15 percent part of this vast island that is ice-free is itself larger than Great Britain. Land of poppies and meteorites, world's most important source of cryolite (used in the manufacture of aluminum), fantastic scene of warm springs and glaciers, of 1-inch tall willow trees, towering ice peaks and five species of orchids, where caribou tongue and raw whale skin are a delicacy, and where celebrated Dr. Morten Porsild, director of the Arctic Station, operates one of the most famous scientific centers of the world, Greenland, with its 17,000 Eskimos and 500 law-making Danes, is virtually an aboriginal paradise closed to foreign settlement, even Danish. Though benevolent in its rule (medical care is free to all Greenlanders), Denmark has an exclusive imperial stake in the huge island, only temporarily dislocated as a result of the war.

Iceland is the author's next subject, which she discusses as a concession to the Myth-mind, since all of it, excepting amazing Grimsey Island, 25 miles to the north, lies south of the Arctic Circle. Windy and rainy, never suffering extremes of heat and cold, Icelanders are not Eskimos, but a mixed breed of Norwegian and Irish descent who boast a 1000-year-old Parliament, 100% literacy, a practically "commercial"-free radio, a free school system straight through college, a fascinating ancient literature, highly organized co-operatives and the highest per capita book-publishing figure in the world.

Mrs. Stefansson then swings east to Lapland (mostly in Sweden), where she pictures two diverse cultures: first, antique pastoralism, visible in the moccasined, blue-coated, red-tasseled, laughing little nomads (a man five feet in height is very tall) among their herds of reindeer; second, modern industrialism, visible in such mining towns as Kiruna, where social security is a commonplace, electricity so cheap that whole mountains are illuminated for fun, and children on sunless days given free ultra-violet lamp treatments in school.

Next on the itinerary is Siberia, popularly thought of as a vast frozen wilderness, but actually Soviet Russia's most potentially valuable domain, whose outer rim accounts for 49% of the land surrounding the Polar Sea. Mushrooming in pre-war years like our old Wild West, Siberia is a continental stretch of precious resources, counting among them coal, oil, gold, platinum and nickel. Its forests alone cover an area equal to half the acreage of the entire United States.

Mrs. Stefansson writes of Russia's scores of Siberian meteorological stations, of shipping in the Polar Sea, of women at work in the Arctic lumber metropolis of Igarka, which boasted a woman mayor, its own vegetables and a population of 20,000 in a decade's building just before the war. The Soviet is definitely on the march, north and east industrially and aeronautically as well as west militarily and politically.

Alaska, one-fifth as big as the United States, with its hot summers (100 degrees in the shade have been registered at Fort Yukon in the Arctic) and vast industrial and aviation potentials, has become a household name to thousands of Americans since the beginning of the war. One-third of this mostly virgin land extends above the Circle, and transportation on the ground is still so primitive that many Alaskans who have never seen a car "ride in planes with the same casualness with which we pick up a taxi at a street corner." Here again the author makes a fascinating detour, this time at Point Hope, scene of one of the most intriguing archaeological discoveries of modern times.

The long swing around the Polar Sea concludes with a profile of Arctic Canada, over which most of the new air routes must go, with much ado about radium finds, oil, summer resorts, fur and modern hospitals to instruct and entertain the by now surprise-proof reader.

All in all, this book, which discovers so much in so little a space, is, for all its unpretentiousness and mere stylistic competency, something of a discovery itself.

A New World In the Arctic

I WENT TO THE SOVIET ARCTIC, by Ruth Gruber (Viking, $3.50). A revised edition with new material covering developments in the last five years.

IN 1932, Brooklyn-born and bred Ruth Gruber found herself, at the age of 20, the youngest doctor of philosophy in the world and, like many less qualified of her generation, broke and jobless. In the plump shadow of a great engineering president, Miss Gruber's lawyer friends were selling red hots at ball games, physicians of her acquaintance piloted taxis, and qualified schoolteachers were selling trinkets at Macy's or the five-and-dime.

Despite all this, Ruth Gruber wangled herself the incredible journalistic assignment of a trip to the new Arctic frontier of the U.S.S.R., aided and abetted by her good friend Vilhjalmur Stefansson, and his correspondents, R. L. Samoilovich, director of the Arctic Institute in Leningrad, and Otto Yulyevich Schmidt, the *Chelyuskin* man.

Unassuming Miss Gruber never did interview J. Stalin or secure an audience with Molotov. She did much better than that: Talking to hundreds of Soviet citizens and exiled Kulaks up and down the breadth of the Siberian tundra, she learned what makes these people work so passionately to build a new world in the frozen Arctic circle.

Fresh from the breadlines of New York, she was deeply impressed by the sense of security the Arctic Russians enjoyed. An engineer told her, "Every year we work in Igarka or any northern settlement counts as two years' work in Central Russia. So we're ready for our pensions in almost half the working time. In a few years, when I'm about 45, I won't have to work any more. I'll be free to travel or do anything I like."

Most of all she was impressed by the role of women in the Soviet Arctic, and in the rest of the country for that matter. Igarka on the Yenisei, a booming lumber town of 15,000 persons, was efficiently mayored and managed by a woman. Ruth Gruber found women holding down every kind of job from stevedore to meteorologist.

Admiration for American achievement embarrassed her by its proportions. This enthusiasm ran higher than ever during 1942, when at Murmansk, she saw Lend-Lease materials pouring in regardless of submarines and Stukas. An amusing sidelight on these supplies and U.S.-U.S.S.R. relations was cast by the comment of a partisan leader in the Bryansk forests who cabled that labels on Swift & Co., Borden and other food containers served as a language primer and were used to teach partisans the rudiments of English. (The supplies were parachuted from planes.) "My scanty knowledge of English came in handy," he said. "My biggest 'customer' was our cook who insisted on an exact translation of all directions on all cans. He was an admirer of egg powder which he used in all possible dishes."

Via the Arctic Circle

COMPASS OF THE WORLD. By Hans W. Weigert and Vilhjalmur Stefansson. With maps by Richard E. Harrison. 466 pp. New York: The Macmillan Company. $3.50.

By HAROLD A. LITTLEDALE

MULTIPLICATION is vexation and symposiums are as bad, for they vex by their confusions, puzzle by their contradictions and drive one mad by their irrelevancies! Then, when the compilers of more than a score of articles by others disclaim acceptance of some of the views without telling which they consider heretical, the reader is left to determine as best he may. Fortunately, an introduction by the compilers of this symposium indicates the direction in which their compass needle points.

Vilhjalmur Stefansson needs no introduction. His books on the Arctic have been an interesting contribution to polar literature. He has labored to impress the view that "the Arctic is not the wasteland of our inherited beliefs." At times he has made it seem so inviting as to be just the place for a picnic, but he has been known to admit that there is snow (in some places) and ice (in others)!

Hans W. Weigert is less generally known but is an authority in the field of geopolitics. It is their joint purpose in presenting this book "to correct misconceptions" in politico-geographical thinking. That, they fear, confuses the minds of statesmen, soldiers and the general public. They believe our present views in this field are a blueprint for an American imperialism alien to American political ideals, incompatible with free enterprise, with welfare economy and with peace. Instead of an Atlantic orientation toward Europe, whose populations will decline, they believe we should develop links with the other great land powers—Soviet Russia and China, whose populations will increase.

For centuries man believed the world to be flat. Even today he thinks the natural way to go to the Philippines, for instance, is by way of San Francisco and westward across the wide Pacific, whereas, in fact, from any point in North America to any point in Asia, the Great Arctic air route through the Arctic combines the shortest flying time together with maximum flight over land and minimum flight over water.

In the circumpolar regions bordering the Polar Sea the authors see a future drift of population, for here is not only land but land on which oil and minerals have been found in abundance and where agriculture is possible. Whereas northern riches are playing a significant role in Soviet planning, we have done little to develop our northern resources.

BETWEEN the United States and Siberia the authors see the Arctic as a crossroad of international travel. Ice, too much for ships, is no barrier to the aeroplane. With natural landing fields, seaplane bases, and river-ice highways thousands of miles long they see easily accessible trade routes across the Polar Sea, that being the world's smallest ocean "with better stepping stones and better weather for flying than either the North Atlantic or the North Pacific, which already have been mastered."

With the development of Siberia would come the development of China. Professor Weigert believes "we have no option but to adapt ourselves to geopolitics which has the vital interests of the United States and those of the great land powers—Soviet Russia and China."

Though it may be argued that the authors seem to miss the fact that great land masses exist also below the Equator and millions live on them, they make out a good case for their belief that the compass of the world points north.

Three-fourths of the land, nine-tenths of the population of the World are north of the equator

Map by Richard E. Harrison from "Compass of the World"

Richard Finnie Says Canol Project Was Historic "Sheer Pioneering" Job

"In conjunction with the Alaska Highway, the Canol Project was the biggest single construction job in the world's history, in respect to extent of area affected, time of accomplishment, and sheer pioneering," declared Richard Finnie, Canadian Arctic explorer and writer, who has returned to his home at Carp after more than two years in northern Alberta, the Mackenzie River district, the Yukon and Alaska as consultant and historian to the Northwest Service Command, U.S. Army.

With headquarters in Edmonton, where he was assisted by Mrs. Finnie, he spent about 50 per cent of his time in the field, travelling by train, boat, dog team, airplane, truck, jeep and tractor, covering tens of thousands of miles inspecting all phases of northern construction activities in the preparation of confidential reports and the making of a complete documentary film record.

For the Corps of Engineers, U.S. Army, and the civilian constructors of Canol and the Alaska Highway, Mr. Finnie had high praise. "I have been back and forth over the Alaska Highway repeatedly, all the way from Dawson Creek to Fairbanks, and had the good fortune to be present at the closing of the last gap in it as an all-weather artery. It is a wonderful road.

First Canadian on Job.

"My chief interest, however, was the Canol Project," he said. "I was intimately connected with it from its inception to its completion. The first Canadian employed on the project, I reached Edmonton by plane after midnight on May 28, 1942. One of my first tasks was to help arrange and to take part in an aerial reconnaissanace from Norman Wells to Whitehorse. On our initial attempt to cross the unexplored mountains of the Mackenzie-Yukon divide we got lost in fog, and it was no fun hedge-hopping among 10,000-foot peaks. But our second try, on June 12, was successful. That flight marked the beginning of exploration for the Canol Project. Subsequent flights, together with ground traverses, located a short, feasible route for the main Canol crude oil line and its access road.

"On February 16, 1944, just 20 months and four days after that first reconnaissance flight, I witnessed the tying in of the oil line at Macmillan Pass on the Mackenzie-Yukon divide. We now had not only a pipeline but a motor road, a telephone line, and permanent way stations from Norman Wells to Whitehorse, nearly 600 miles. More than half the route lay through country where there was not even a trail before, and a lot of it had never been seen by white men or Indians.

Problem of Logistics.

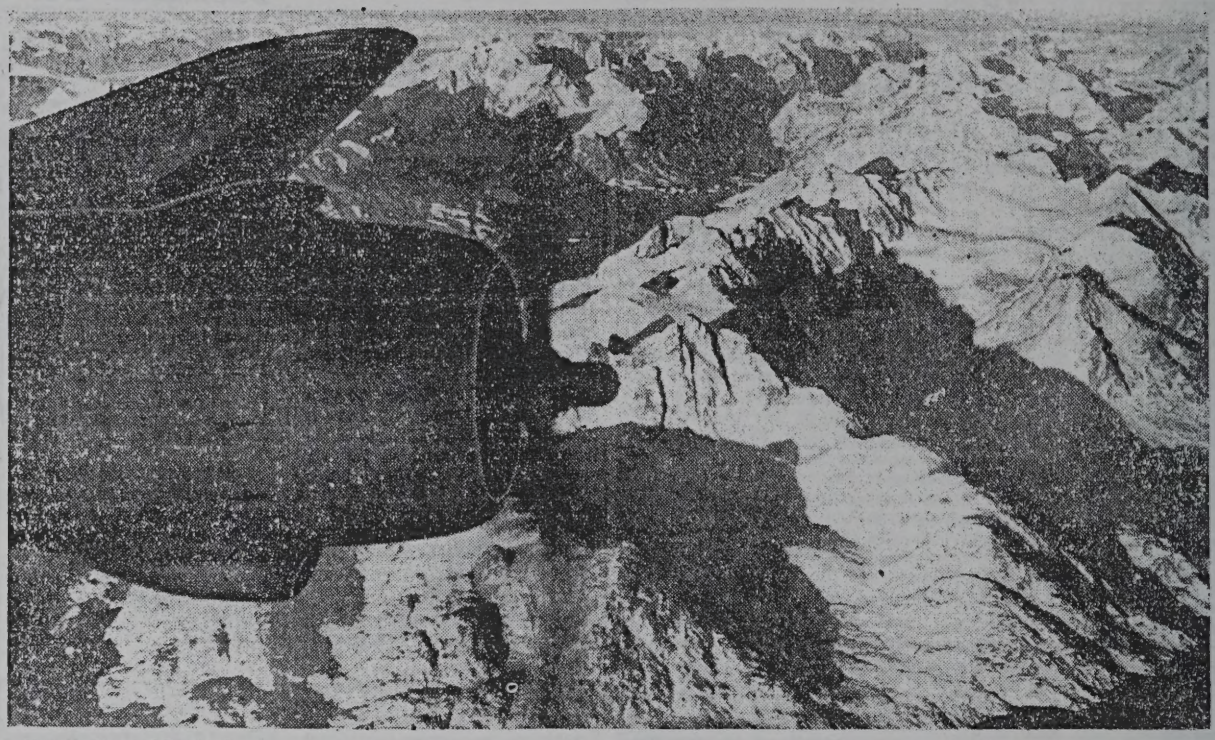
"The Canol Project was largely a problem of logistics in sparsely inhabited areas where transportation facilities were either inadequate or lacking.

"I don't think it has been brought out before," Mr. Finnie continued, "that the army engineers and the civilian constructors of the Canol Project, Bechtel - Price - Callahan, actually pioneered more miles of road and carved out more new airfields than did the builders of the Alaska Highway.

Winding up their service with the U.S. Army, Mr. and Mrs. Finnie produced two official war department films in sound and color on the Alaska Highway and the Canol Project, with the co-operation of the Signal Corps at the Photographic Center, Long Island city, N.Y. The photography and the original scripts for both films were done by Mr. Finnie, and he and his wife were in full charge of production under direction of the U.S. Army Service Forces. The two are now working on a book on the Canol Project, and have just come from San Francisco, where they compiled a great deal of the manuscript.

Cover Page

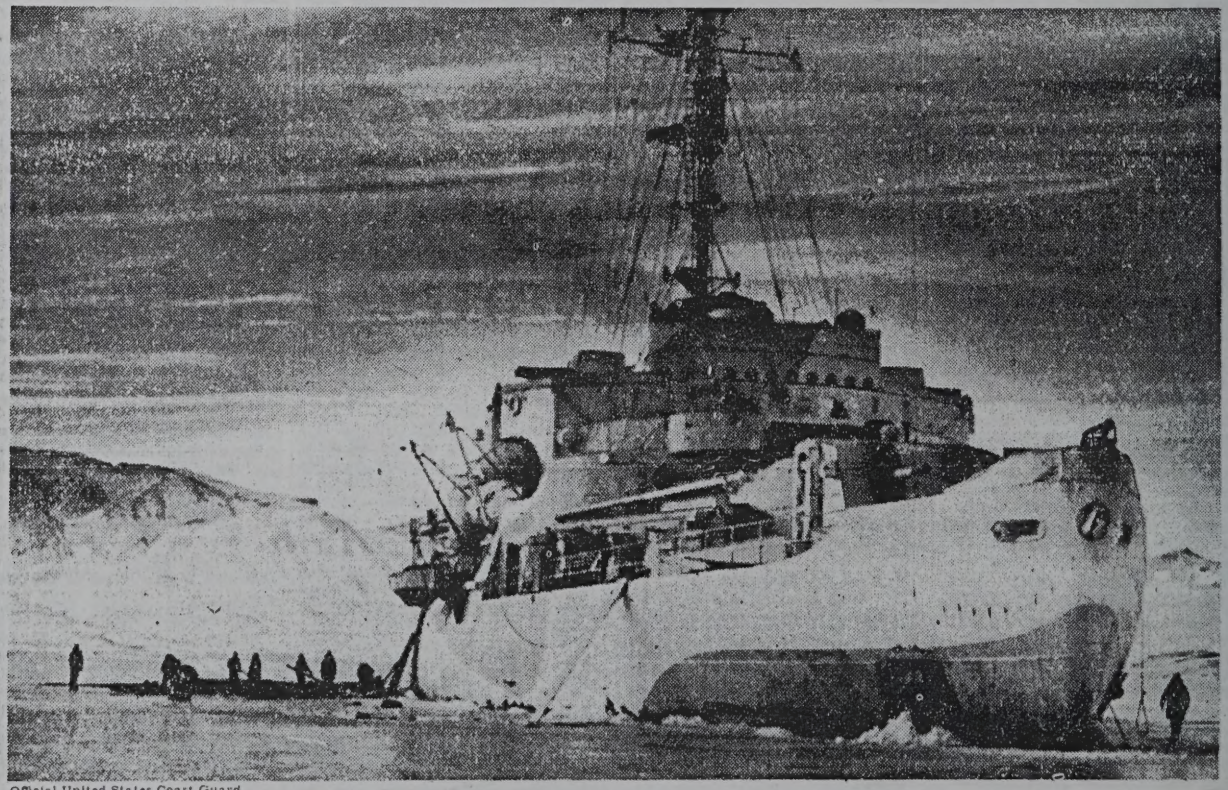
Major Paul A. Siple helps his dog team on the first Byrd Antarctic Expedition of 1928-1930. This striking photograph is from his book, "A Boy Scout With Byrd," published in 1931 by G. P. Putnam's Sons. It is now in its 16th printing in English and also is published in Swedish, French, Danish - Norwegian, Hungarian and German.



Courtesy Air Transport Command

Greenland Ice Cap Spreads Out Below as Fast Airplane Wings Its Way to Old World

Low-thermometer flying of North Atlantic route provides beauty and the necessity for proper clothing. The second winter of flying the stormy routes to the European war fronts is now under way. Every precaution is taken before and on flights to keep operations safe and sane. Flights now under way have direct bearing upon development of route activities after the war.



Official United States Coast Guard

Captured Nazi Supplies Turned Over to Danish Sled Patrol

The United States Coast Guard combat cutter Eastwind, one of the two engaged in liquidation of a German radio weather station in northeast Greenland, turns over captured supplies to the Danish Sled Patrol. Landing forces from this cutter surprised and captured the weather station with its crew of 20. The enemy ship was beset in the ice pack. In a dramatic series of events in the Arctic during the summer and early fall the Coast Guard blocked German attempts to maintain radio weather stations in Greenland—taking 60 Nazi prisoners, destroying two enemy bases, capturing one armed trawler, forcing the scuttling of another, and finding a third abandoned in the ice.